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JULY, 1912

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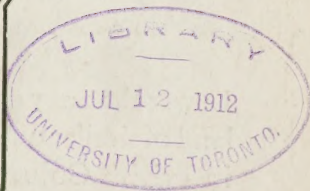
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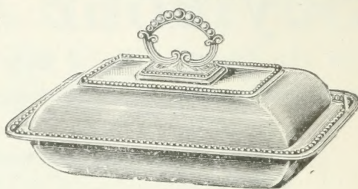
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FORT GEORGE

As a Manufacturing Centre

(Vancouver News-Adv., Jan. 18.)

The great possibilities of some of the points in the Central Interior of this province as manufacturing centres are becoming better known every day from the reports brought down by those who are engaged in investigating the resources of the North. Not least important among the factors that will make up the industrial growth of some of these new centres are the water powers which are found in close proximity to raw materials.

A report has just been filed at Victoria on water power of the Willow River, about seventeen miles east of FORT GEORGE. The Willow River is a tributary of the Fraser, entering the latter river about twenty-five miles above the junction of the Nechaco with the Fraser. The Willow Canyon is located about thirty miles above the mouth of the river and is approximately due east from FORT GEORGE, a distance of some seventeen miles.

The canyon is formed from a huge mass of soil and igneous rock that is about 12,000 feet or a little more than two miles in length, with walls as high as 250 feet on either side. There are really two distinct canyons, although both are really a part of the same large one. In the bottom of each of the two at low water the river varies from ten to sixty feet in width, averaging about forty feet, and in some places as deep as twenty feet. The vertical fall from water level at the head to water level at the foot is approximately 200 feet. At this canyon it is proposed by the FORT GEORGE Power Company, Limited—a company which has undertaken the work of development—to develop cheap power for manufacturing and other purposes. Several tests have been made; one at extreme low water in August last, showing a flow of 250 second feet. In the development scheme a dam is planned to create a service reservoir which will be the means of maintaining a constant head of water on a turbine to be installed in a power house situated on the lower face of the dam. In addition to this, a smaller dam, placed near the middle of the upper canyon, will create a local storage reservoir covering approximately two square miles to an average depth of about thirty feet.

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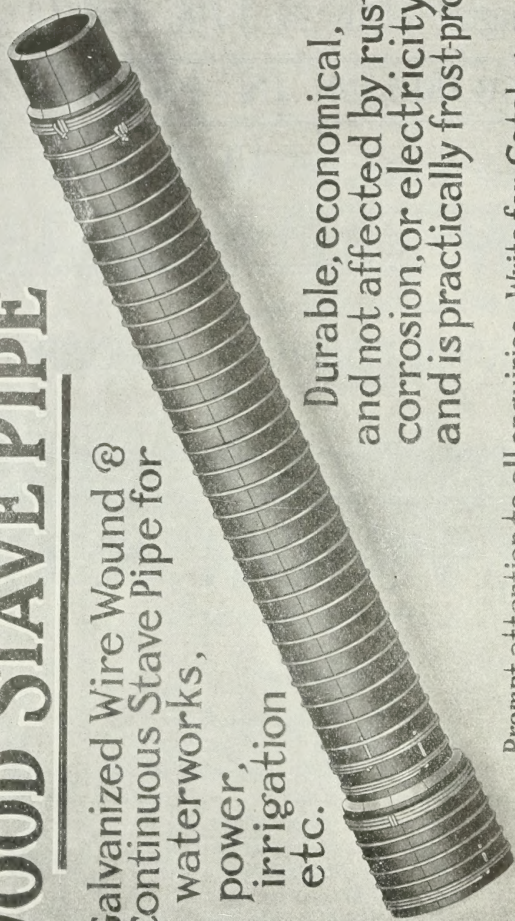
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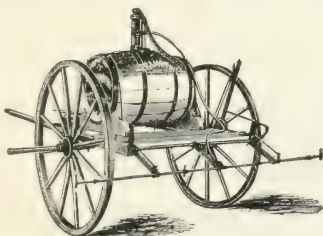
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Her woods and valleys green;
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Good ships be on her waters,
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THE FRUIT MAGAZINE

Scientific Farmer and Canadian Citizen

VOL. V

VANCOUVER, JULY, 1912

No. 4

Dominion of Canada

By Mr. John B. Kerr, Vancouver, B. C.

With the annual recurrence of Dominion Day it is natural in a people whose history is so brief, whose future is so bright, and whose opportunities are so great as are those of Canadians, to look back, over the period of their existence as a commonwealth, for the purpose of reviewing their achievements, estimating their progress and correcting their mistakes. The advance made by the Dominion, especially during the past fifteen years, has been so remarkable that in such an inquiry much reason would be found for gratification while the responsibilities for the future might be impressed more clearly upon the national mind.

Some ten years ago Sir Wilfred Laurier, whose opportunities of judging the national prospects were perhaps greater than those of any other man in the country, declared that the Twentieth Century belonged to Canada. It was a terse apothegm, the full significance of which was not at the time fully appreciated by the public, but which is beginning to be regarded, even beyond the boundaries of the Dominion, as a prediction which cannot fail of fulfillment. In the years which immediately succeeded that startling challenge the progress which the country has enjoyed has been such that it might almost be said that the Canadian statesman's prediction has contributed to its own accomplishment. It was then that that remarkable tide of immigration to this country began which has increased in volume until in the present year it will probably add half a million to our citizenship. With the attention of the world attracted to the opportunities which this country offers for investment and settlement our commerce has grown amazingly and we now have the spectacle of the nations of the world eagerly seeking entrance to our

markets and anxious to share in the returns from the development of our resources.

Any proper sketch of the Dominion of Canada should necessarily be prefaced by some review of the conditions which prevailed in the various provinces and in the unorganized territories at the time of confederation, and of the events which led up to that achievement. This article, however, would be unnecessarily lengthened in looking backward beyond the pre-confederation period. Suffice it to say that the first birthday of the Dominion of Canada saw a very sparse population, indeed, in the provinces which were originally united under the British North America Act. In 1867 the four provinces of Upper and Lower Canada, Nova Scotia and New Brunswick, as the result of a conference held in the City of Quebec, decided to ask the imperial parliament to unite them in a federation to be known as the Dominion of Canada. The moving spirit in the conference was Sir John Macdonald, who more, perhaps than any other man whom British North America has produced, possessed the statesman's vision and judgment. His idea was that of a union of all the British possessions in this hemisphere, and he lived to see the realization of his dream in all except the inclusion of Newfoundland and Bermuda. Associated with him in this great movement were men of large outlook such as Sir George Cartier, George Brown, Sir Charles Tupper and Thomas D'Arcy McGee. At that time the population of the four members of the new union was scattered along the coasts of Nova Scotia and New Brunswick, the shores of the St. Lawrence, and the lesser of the Great Lakes. Much of these provinces, in fact, the greater portion of each, was wilder-

ness. Ontario was then, as it is now, the most important in point of wealth as well as the most enterprising and aggressive. In all of these provinces a successful fight had but lately been made for representative government and the institutions which the country possesses today are merely a development of those under which these provinces then flourished. From the St. Mary's river, through which the waters of Lake Superior flow into Lake Huron, westward to the Rocky Mountains the country was practically a vast solitude, occupied at great intervals by aboriginal tribes of Indians and a few scattered settlements of white men whose precarious existence depended very largely upon following the same pursuits as the Indians. On the other side of the Rocky Mountains, what is now the province of British Columbia had assembled a few thousand whites in the city of Victoria, along the Fraser river and in Cariboo, who were attracted to the country by the discovery of gold. It was this vast region, stretching from the Atlantic to the Pacific, which Sir John Macdonald and the few kindred spirits who saw largely through his eyes, conceived the ambitious project of uniting in one great confederation.

It was two years after the Act for the union of the four provinces had become a thing accomplished that the parliament of Canada, of which Sir John Macdonald was then the first minister, entered into negotiations with the Hudson's Bay Company for the purchase of the Northwest Territories and Rupert's Land. In these two regions were included all that is now familiarly known as the Canadian Northwest and the great northern unorganized territories, with the exception of British Columbia, which was a Crown colony under a government of its own. For the sum of Three hundred thousand pounds, the Hudson's Bay Company parted with this immense region, which is now, more perhaps than any other portion of the Dominion, Canada's hope and pride. Having added this territory to the Dominion, the Canadian government looked still farther west and made overtures to British Columbia, offering her substantial inducements to become a member of confederation. The negotiations which ensued were protracted owing to what then seemed the impossible demands of the far western colony. Among these was the construction of a transcontinental railway by which alone it was deemed possible to effect a permanent consolidation. The Canadian

Premier, to the alarm of his political opponents and to the astonishment even of his own supporters, finally consented to the terms which included the construction of this line of railway across the continent. Even then, it is likely that the feeling in British Columbia, which was adverse to union, would have balked the efforts of the Canadian statesman had it not been for the intelligent co-operation of Sir Anthony Musgrave, then governor of the Pacific Colony. It was finally decided that the building of the transcontinental railway should be begun two years after British Columbia had become a member of confederation and should be completed within ten years. In 1871, British Columbia became a Canadian province. Previous to that time an agitation had been begun in Nova Scotia for repeal of the union and the feeling in that province was so strong that a legislature was elected pledged to complete separation. The only member not so pledged was Sir Charles Tupper, who had been one of the leading spirits in bringing about the union in 1867. Largely through his influence, however, and the refusal of the British Parliament to agree to a repeal, the efforts of the separatists were defeated and the people of the province were mollified by a grant of better financial terms.

In 1870 the province of Manitoba was carved out of the Northwest Territories and became the sixth member of the Union. That event was preceded by what is known as the Red River Rebellion, when Louis Riel incited the French half-breeds of that region to rise against the Canadian government, and it was after the suppression of this revolt by Sir Garnet Wolseley that it was decided to open that part of Canada to more systematic settlement by the creation of a local administration. In 1873, Prince Edward Island was incorporated in the Canadian confederation, making the seventh province and rounding off the Union with the inclusion of all the continental territory except a strip along the Atlantic Coast, now called Labrador, which was a dependency of the island of Newfoundland. These seven provinces constituted the Canadian confederation until 1905, when under the government of Sir Wilfred Laurier, Saskatchewan and Alberta were made autonomous members of the Dominion.

From 1867 until 1890 the government of the Dominion was kept busily engaged in developing those national institutions necessary to the life and progress of the commonwealth. In 1867 the postal rates, which had been excessive and unsatisfactory, were reduced

and unified. In 1868 a militia organization was created and the banking system, which the country now possesses was placed on its present basis by acts culminating in 1871. In 1876 the Intercolonial railway, the construction of which was one of the terms of the original union, was opened to traffic.

It was at this time that the great issue which threatened to dissolve the Dominion into its original fragments and which caused the unmaking of governments, became a subject of fierce and protracted discussion in the Dominion parliament. The construction of the transcontinental railway was necessary to the retention of British Columbia in the union and Sir John Macdonald faced the problem with his usual resolution and courage. It was decided by the government that large inducements should be offered for the building of this immense enterprise and those inducements proved sufficient to bring two rival companies into the field. At that time the party spirit in eastern Canada was more pronounced even than it is now and the Premier did not hesitate to employ the rivalry between these companies on behalf of his political party. The discovery that one of the companies had furnished him with considerable sums of money for election purposes proved fatal not only to his government but to the hopes of the company itself of securing the charter for the building of the railway. With the accession to power of the Liberal party under Mr. Alexander Mackenzie, in 1873, the work of constructing this line was undertaken by the government itself, but the impossibility of making much progress under the conditions which prevailed created dissatisfaction in British Columbia and threatened the withdrawal of that province from the Union. In 1878, Sir John Macdonald, however, returned to power. The eastern provinces had just passed through a period of severe depression, largely the consequence of very restricted markets for the products of the country, and Sir John advocated a new policy which is the one to which Canada has since adhered—the policy of protection for her national industries. With his return to office a vigorous railway programme was put into effect and the Canadian Pacific Railway company, with a capitalization of twenty-five million dollars, and a grant of twenty-five million acres of land, was organized to push the transcontinental railway to completion. That was in 1878 and eight years after in the face of tremendous difficulties the present road which reaches from one ocean to the other was an accomplished fact.

Undoubtedly, it was the completion of this enterprise which is largely answerable for the subsequent prosperity and for the present position of the Canadian confederation. Without the transcontinental railway, Canada could not have been held together, the west would never have been opened up, and British Columbia would have been lost to the union. Sir John Macdonald only lived five years after the completion of this great undertaking, but he lived long enough to realize that his statesmanship had succeeded and that he had laid the enduring foundation of a great nation. What was to come after could not but be very largely the development of the policy for which he had stood and which he had made effective in spite of the most powerful opposition and, seemingly, insurmountable obstacles.

From that time forward, politics in Canada has become rather a question of good administration than a conflict of issues, and it is in the encouragement given to the steady development of the country's resources and to the continually enlarging volume of her trade, directed in proper channels and under intelligent conditions, that we have to look for the display of statesmanship in our rulers. From 1878 to 1896 the progress of the country was not rapid. The people enjoyed a fair share of prosperity and the manufacturers of the country began to flourish under the protection accorded them by the tariff regulations.

There was no very great volume of immigration and in the Northwest Territories and Manitoba, and the settlements along the line of the new railway constituted practically all the white population of the country. British Columbia was benefitted to a very considerable extent by the expenditure on the construction of the line and some flourishing towns arose, as a consequence. Vancouver owed its existence directly to this cause and became the Pacific terminal of the transcontinental line. The wealth and importance of the Dominion was centred, however, in the eastern provinces and largely in Ontario and Quebec. A second rebellion, under Louis Riel, occurred in 1884 and occasioned the dispatch of another force for its suppression. To this circumstance may be attributed, to some extent, the first systematic effort to settle the prairie country. In 1891, Sir John Macdonald died and a succession of Conservative premiers directed the government until 1896, when Sir Wilfred Laurier assumed the reins of office as head of a Liberal government.

It is from 1896 that we must date the real progress of the Dominion. It is from that

date that the great West begins to play an important part in the life of the country. Canada never before had seen so many men of great ability united in one ministry as Sir Wilfred Laurier gathered about him on his accession to office. Among these not the least able, in some respects the ablest, and certainly the one with the largest knowledge of the country as a whole was Mr. Clifford Sifton, who was given the portfolio of the Interior and who, in an especial sense represented western Canada. To him it fell to carry out in no small measure the views which Sir John Macdonald had cherished for the settlement and upbuilding of that great region. As Minister of the Interior, Mr. Sifton had control of the bureau of immigration and it was through that that he worked largely for the upbuilding of the West. He understood, as few men did, the opportunities which the western country possessed and he formulated a programme which induced the best kind of settlement from the Old World and from the United States. It is the result of the plans which he made, and which have been followed by his successors in office, that last year we obtained nearly half a million new citizens from beyond our borders and that of these over two hundred thousand were United States farmers. This immense yearly influx has changed the whole face of the western country and has made of a wilderness a country with a large, thriving and industrious population. It is owing to that policy of his in no small degree that the East as well as the West owes the prosperity which it now enjoys. Together with this tide of immigration came increasingly large quantities of capital for the development of our natural resources, our timber resources, our minerals, our fisheries. And in all these branches of industry there has been a steady and continued progress since 1896.

The government of Sir Wilfred Laurier realizing the necessity of large legislation to provide due facilities for the increasing population and needs of the country, expended freely the revenues, now becoming very much larger than the Dominion had yet known. A penny postage was established; a Pacific cable received recognition and assistance from the government; steamship communication with the Old Country was greatly improved; to encourage closer union with the Mother Country tariff preference was granted to British manufacturers; the Canadian government assumed the responsibility for imperial defence at Halifax and Esquimalt, and formulated a policy for the construction of

another transcontinental system of railway which would still further open up the western prairies and increase the prosperity and wealth of the country.

In 1897 the Boer war provided an opportunity for Canada to display its loyalty to the empire, and it did so by the dispatch of three contingents of troops to South Africa. That spirit of devotion to our connection with the Mother Country was manifested still later in the policy which was adopted for the construction of a Canadian fleet, which would give assistance to the admiralty in the event of a conflict between Great Britain and foreign powers. In fact, the imperial sentiment of the people has gone hand in hand with the progress and prosperity of the Dominion; and while the people of Canada insist that they shall be free to manage their own affairs, their pride in imperial connection is no less staunch than their determination to make effective their own national conceptions. Practically all the matters at issue between the United States and Canada which were of long existence have been settled through commissions in which Canada has been directly represented, and today she is in the position of a country making her own treaties with foreign states.

The consequence of the statesmanlike administration of the last fifteen years is that Canada has become a nation in every sense of the word; a nation bound by ties of sentiment and of interest to the Mother Country, ties which are all the more enduring that they depend upon the free choice of the people. In every department of national life she is making immense advances. With still a comparatively small population, having regard to the immensity of the country and to the inexhaustibility of her resources, she is today the land of promise for the millions of home seekers in the Old World and for the enterprising farming population of the United States. Her vast extent of fertile country possesses possibility in the way of internal communication and of channels leading to foreign markets found in no other country in the world, and this easy means of communication is bound to be a determining factor in the race for supremacy among the overseas dominions of Great Britain. All the advantages enjoyed by long settled countries are shared to an almost equal extent by the Dominion. Her educational systems, under the jurisdiction of the various provinces, are not inferior to those which prevail among the most enlightened peoples. The administration

of her laws is a matter of pride to her people and the ideals which animate her citizens are perhaps higher than those to be found elsewhere. Canada is essentially the country of the future. Nothing can stay her progress, and her greatness is assured; all that is needful is that her governments should exercise due discrimination in admitting the outside world to the advantage of her citizenship and that the development of her resources should be directed with intelligence and honesty in the interests of her people.

In the department of literature little of permanent value has yet been accomplished. Some minor poets and novelists and a few conscientious historians represent the result of her attempts in this direction. But undoubtedly, in literature, as well as in the other departments of national effort, there is a great field for Canada. The extent and variety of the country itself will stimulate her children to mental endeavor and when the country has had time to produce a leisure class we shall probably see the creation and growth of a distinctive literature.

KILLING CUTWORMS

Oregon Agricultural College, Cornwallis, Ore., June 22.—That poison bran mash is the best thing to kill cutworms is the belief of A. L. Lovett, crop pest expert of the Oregon Agricultural College.

"The cutworms pass the winter in the soil as partly grown larvae," he says. "They are in the soil in the spring when the ground is prepared for planting. The poison mash should be sown over the ground a few days before the crop appears, and the field is freed of them before the plants appear. For later treatment the only way is to put a small heap of mash around the base of the plants to be protected. To make the mash, mix 16 pounds of coards bran, a pound of Paris green, half a pound of salt, a gallon of any cheap syrup, and enough water (warm to make a heavy mash.

"Poultry should not, of course, have free range where the poison is."

The tramp sighed and stepping over to the bed looked wistfully at the child. He recalled the time when he had had a home and had told his little daughter a story every night before the evil days came that had seen her go away and had then made a wanderer of her father.

A BURNS RELIC.

An unpublished poem by Robert Burns has recently been discovered in possession of Mrs. John Moffat of St. Andrews, Scotland. The verses are prefaced as follows:

"Composed by Robert Burns, and presented to the nobleman addressed upon being called up from the servants' hall (where he had been sent to dine along with them) to add to the entertainment of his company, along with which company he had been asked to go on an excursion to the Bass Rock. On presenting which he put on his hat, turned on his heel and retired."

This poem was copied by Mrs. Moffat's grandfather, the late Mr. Edward Sandersor., nearly one hundred years ago.

The verses were as follows:
 "My Lord, I would not fill your chair,
 Tho' ye be proudest noble's heir.
 I came this night to join your feast
 As equal of the best at least!
 'Tis true that cash with me is scant,
 And titles trifles that I want.
 The King has never made me kneel
 To stamp my manhood with his seal.
 But what of that? The King on high
 Who took less pains with you than I,
 Has filled my bosom and my mind
 With something better in its kind
 Than your broad acres, something which
 I cannot well translate to speed.
 But by its impulse I can know
 'Tis deeds, not birth, that make men low.
 Your rank, my Lord, is but a loan!
 But mine, thank Heaven, is all my own
 A peasant, 'tis my pride to be;
 Look round and round your hall, and see
 Who boasts a higher pedigree!
 I was not fit, it seems, to dine
 With those fox-hunting heroes fine.
 But only came to bandy jests
 Among your lordship's hopeful guests.
 There must be here some sad mistake—
 I would not play for such a stake.
 Be a buffoon for drink and meat,
 And a poor Earl's taxpaid seat!
 No, die, my heart, ere such a shame
 Descends on Robert Burns' name."

"Willie," said his mother sorrowfully, "every time you are naughty I get another gray hair."

"Gee!" said Willie; "you must have been a terror. Look at Grandpa."

Marvels of Nature

Man's Invention Foreshadowed By Nature in Plant Life.

Nature's most priceless gems are seeds. They perpetuate vegetable life, without which even the lowest form of animal life would be impossible. Hence, in comparison with seeds, the world's treasures of gold, silver and precious stones—even its resources in iron ores, coal, petroleum and other minerals—are of little account.

The seeds that contain the germs of vegetable life being of such transcendent importance, it is not strange that Nature has taken the most extraordinary precautions to make the disappearance of any plant species one of the rarest of phenomena. A single tree, in the course of its productive life, yields enough seeds to start vast forests. A catnip plant is said to bear from 40,000 to 60,000 seeds. The average number of seeds borne in the head of a cat-tail is said to be in the neighborhood of 100,000. A large plant of purslane is said to bear as many as 1,250,000 seeds; and a patch of daisy fleabane is estimated to yield 3,000 seeds to each square inch of land covered by the plants.

Fully as surprising as the prodigality with which Nature produces seeds is the ingenuity displayed for their dispersal. In this great work, it appears that nearly every imaginable agency has some part—the gentle breeze and the blast of the tempest; brook, pond, lake, river and ocean; snow, flood, ice and rain; beasts, birds and men. To take advantage of these agencies, Nature has foreshadowed many of man's inventions with devices acting much the same as the parachute, the balloon, the glider, the screw propeller, the sail, the raft, the boat, the wheel, grappling hooks, contrivances for drilling, and propulsive devices.

It is possible that the extraordinary buoyancy of the cocoanut first suggested to some antediluvian inventor the idea of the boat; it may be that he broke it open to extract the milk, and then from observing the behavior of the half-shells upon some tropic stream was led to hollow out the first rude pirogue. It is certain that he could have had no better model. The cocoanut is hollow, with an extremely hard shell, impervious to water, and very slow to decay, so that ocean currents

carry it for tens of thousands of miles without injury. So it happens that scientists are unable to determine whether the cocoanut is indigenous to Asia, Africa or America—for the same species is found on the shores of the Atlantic, Pacific and Indian oceans; and there is hardly a coral island or atoll in tropic seas of so recent origin that the characteristic tuft of cocoanut palms, growing from nuts cast up by the waves, has not appeared upon its shores.

But Nature has other craft for securing the safe conduct of seeds upon the waters, more elaborate, if not more efficient, than the shell of the cocoanut. The seed vessels of the bladder nut have three separate, water-tight compartments, each containing a few hard, smooth seeds. If one, or even two, of the compartments spring a leak, the raft still floats and bears the cargo in safety until cast ashore or lodged upon some mud flat. Here "in a nut shell" is the idea of the separate air-tight compartments that contribute so greatly to the security of passengers upon modern steel-built ocean liners. The cranberry, too, is a boat of no contemptible powers of endurance, the seeds safely lodged in compartments, and packed in light, spongy material; and the seed pod of the water lily may carry its cargo of shovel cultivator between the rows, letting the fifteen or twenty seeds for a long distance before dropping them in the mud to germinate and take root.

Many seeds are equipped for either aviation or navigation, flying upon the wings of the wind, or floating upon the face of the waters with equal facility. Everyone has admired the seed pods of the milkweed and the downy parachutes that unfold when the ripened seed vessels burst open. The long, feathery rays extend outward and upward, so that they catch the slightest breath of air. The seed depends from these rays, like the basket of a balloon; and the seed and its carriage of down are hardly heavier than the air which they displace. Close inspection of the seed of the milkweed shows that around the kernel is a corky margin that keeps it afloat, like a raft, in case, in its aerial wanderings, it happens to fall into the water.

The seeds of the dandelion, golden-rod, cat tail flags, thistles and cottonwood tree are similarly equipped with downy parachutes that serve to carry them far on the summer winds, or to keep them afloat should they chance to fall upon the water. The pappus of the ripened dandelion is the most beautiful found in nature. Each tiny seed hangs far below the spreading white filaments, bearing a curiously whimsical resemblance to a man hanging from a parachute, as it soars through the air. In damp weather, when these downy airships would be injured by the moisture, or beaten to the ground by rains, the thistles and some other plants close tightly, perfectly protecting their contents. Then when the skies clear, and aerial navigation is safe, the heads open and the little airships are released to bear their seed cargoes away. Cotton seeds are encased in down, but cultivation has developed them to such an extent that they are too heavy to be borne aloft by the wind. However, an attempt to straighten the fibres, leaving them attached to the seeds, results in a curious reproduction of the shape of a butterfly. The adaption of the seeds of willows and cottonwoods to water transportation explains why these trees are found along water courses for many hundreds of miles, and the facility with which the seeds of poplars and birches travel with the wind explains why these usually spring up to replace forest growths that have been burned or cut down.

One nature lover has given particular study to the transportation methods employed in the distribution of the nuts of the basswood, with interesting results. The nuts are borne in little clusters attached by a single stem to odd, leaf-like bracts. When dry the bracts are bent near the middle, and the edges curve in towards the nuts. The purpose of the bracts was long a matter of speculation; but observation has shown that they facilitate the transportation of the nuts through the air, on water, on land, or over snow and ice.

When a high wind tears the bract from the tree, the heavy nuts pull towards the ground, acting much like the string of a kite. The wind catches the incurving surface of the bract, imparting to it a whirling motion, so that it is carried a considerable distance. When the nuts reach the ground, their travels are by no means finished. Every gust of wind catches the bract and carries it farther. In winter, on ice or frozen snow, the bract forms an admirable ice boat, and often travels for miles. And in case it happens to fall in water, it is an aid to navigation. The dry

nuts float, and the free portion of the bract is forced into the water, while the portion adhering to the peduncle is raised obliquely, like a sail, to catch the passing breeze.

The half-pods of the locust are as serviceable ice-boats as the bracts of the basswood. They are often found miles away from the nearest tree of their species, with the seeds still in place. Many weeds retain their seeds until the approach of spring; and when the ground is covered with hard-packed or frozen snow these seeds are essential to the subsistence of birds that remain in the inhospitable north through the winter months. The birds consume many of the seeds, of course, but they dislodge still others, and the winds shake still more from the dry stalks. These are blown about and widely scattered on the smooth frozen surface, traveling many times as far as they would be able to do on the bare, uneven ground, which offers a thousand obstacles to the seeds' advance.

The ground nut, or ground cherry, bears its fruit in a thin, paper-like sac much larger than the fruit itself. When ripe and dry the fruits break off, and the tiny paper bags are sent helter skelter by the force of the wind. The papery sacs are essentially balloons, not sufficiently buoyant to rise in the air, but light enough to be blown about with ease.

Seeds with wings are almost as common, although less conspicuous than those with parachutes. The maples and boxelders are among the most familiar examples. Seeds of many species of pine are similarly winged, but are concealed in cones, and for that reason are not often noticed. When fully matured, the cones open and permit the seeds to drop out before the cones themselves fall. The largest cones borne by any trees in the world are those of the sugar pine of the Sierra Nevada mountains, with those of the bull pine coming second. The scales open only in dry weather and close again when it rains. This is provision of nature for the scattering of the seeds as widely as possible, as the wind would not carry them far if they were burdened with moisture.

Winged seeds are never symmetrical, one side being larger and heavier than the other. In shape they are remotely suggestive of the "planes" of an aeroplane, and more closely of the blades of a screw propeller. In action they partake of the nature of both. Their thin, blade-like form adapts them to catch the wind and float upon it; and their lopsidedness imparts to them a whirling motion, giving them a screw-propeller action that carries them for-

ward much farther than would be possible if they were symmetrical or evenly balanced.

The seeds of the acacia are born in pods, which burst open when ripe, but cling to the trees for months, until torn away by a gale of unusual severity. Most of the seeds are blown away before the pods themselves fall. Around each hard, black seed is a tiny life-preserver—a belt of corky material, attached at one side to the pod, and requiring a hard wind to blow it loose. The life-preserver then gives buoyancy to the seed, so that it is carried a considerable distance before falling to the ground.

It is altogether conceivable that some prehistoric Newton first made the sagely scientific observation that a round object rolls more easily than a flat one, and from this proceeded to the invention of the wheel, from watching the behavior of tumbleweeds. When ripe and dry, the branches of these curve in at the top, forming a rough, skeleton-ball. Then they break off near the root, and the winds send them rolling and tumbling over the fields, scattering thousands of seeds as they go. The representative American tumbleweeds, known to botanists as *Amaranthus albus*, is found on the great plains, where it has plenty of room for exercise. These tumbling balls are frequently two, three or even four feet in diameter, and sometimes pile up against wire fences in such masses as to flatten them to the ground. They have been known to fill up deep railroad cuts, causing great annoyance and inconvenience. Old timers tell of the consternation that was sometimes caused among construction crews, who had never seen tumbleweeds before, when the first railroads were being built across the plains. The men seeing long columns of white masses, consisting of tens of thousands of tumbleweeds, driven at terrific speed before the wind towards them and entirely ignorant of their nature, were at first terror stricken, and sought safety in flight.

The Russian thistle is a foreign tumbleweed, introduced by immigrants about 1885, which has taken possession of thousands of acres of land in the Dakotas, Minnesota and Wisconsin. From a distance, plants of this kind, rolling before the wind, have been mistaken for flocks of sheep on the run.

The rose of Jericho—*Anastatica hierochuntica*, which is not a rose at all—is a typical tumbleweed of the steppes of Asia. It is believed that this plant is the Gilgal, translated "wheel" in the Thirteenth verse

of the Eighty-third Psalm—"make them like a wheel; as the stubble before the wind." During the arid fruiting season, the plant breaks loose near the root, and the branches bend inward, forming a ball. The plant, carrying its seeds, is then blown along until it finds moisture, when the branches straighten out and the cells containing the seeds open. Other tumbleweeds of the steppes, belonging to diverse families and having nothing in common but their methods of seed dispersal, are rolled together until they form huge balls, known as steppe-witches or wind-witches.

Extreme lightness characterizes the seeds of most saprophytic and parasitic plants. Some orchids have seeds that weigh not more than .000002 gramme each, and float in the air like minute dust particles. Puff balls "explode" and shoot their ripened spores with sufficient force to carry them several feet. Sweet peas, the California poppy, "touch-me-nots" and some other plants burst their seed vessels with sufficient force to hurl the contents for some distance. The seed vessel of the witch hazel opens at the top when ripe, and contracts at the bottom until at last the sides pinch the seeds with sufficient force to expel them. They have been known to shoot their seeds for a distance of thirty feet. The violet similarly expels its seeds by pinching. The sunflower, catnip and many other plants bend in the wind; but when the wind pressure is removed, the stalks straighten with a jerk that catapults the ripened seeds for a considerable distance.

A notable exception to the rule that parasitic plants produce minute seeds, adapted to wind transportation, is found in the seeds of the mistletoe. Its seeds are quite large, contained in beautiful translucent white berries, which are very attractive to many species of birds. The birds, however, do not relish the seeds; but when they try to expel them they have great difficulty, owing to the tenacious cement that surrounds the seeds. Flying from tree to tree, the birds wipe their bills vigorously many times, and sometimes on many different trees, before they succeed in dislodging all the mistletoe seeds. These are then cemented firmly to the bark of the trees, into which they send tiny rootlets, and finally develop into plants.

Among other plants that rely upon animals for the dispersal of their seeds, beggar lice, beggar ticks, burdocks, and cockle burs are familiar examples of wide distribution. These are true plant hoboes, so persistent in beating

their way that force is necessary to remove them. The burdock is one of the most persistent of the tribe, being furnished with sharp grappling hooks that enable it to hold firmly to any yielding object. The clinging awns of "bearded" varieties of wheat are no doubt inherited from the prehistoric parent of that plant, which must have depended upon animals for the dissemination of its seeds. It is noteworthy that the seeds of wheat, corn, rye, barley, buckwheat, oats and rice, which have been developed by cultivation, would soon become extinct but for man's care. Although of supreme moment to mankind, these are of no importance in nature's scheme of things.

Porcupine grass grows in dry soil in the northern States and on the dry prairies of the Rocky Mountain region. It is execrated by ranchmen on account of the boring propensities of the stiff, sharp awns attached to the seeds. These awns are straight when damp, but twist into screw-like shape when dry. This alternate twisting and straightening of the awns enables them to bore into the ground, thus planting the seeds in the soil. But they frequently lodge upon the bodies of sheep and dogs, and bore through their woolly or hairy coats, even penetrating the skin, and sometimes causing the death of the tortured animal. Short-haired animals remove these troublesome seeds by rolling on the ground, or rubbing against trees, in this way spreading the plant. The seeds of the pin clover—*Alfiliria*—are similarly equipped, and constitute as great a nuisance wherever the plant grows.

Many persons have wondered why the rose has thorns. It is for the same reason that the farmer surrounds his orchards with barbed wire fences, and that the grouchy bachelor decorates his garden wall with broken glass. The red or yellow rose-tips are eaten by many species of birds, which, however, consume only the fleshy portions and scatter broadcast the hard seeds. But mice and squirrels are also fond of the fruit; and these consume seeds and all. So nature has barbed the rose bush, to keep away destructive mammals, leaving aerial approaches unimpeded for the use of the birds. Similarly, nature covers the cacti with a defensive armament of thorns to keep away animals that would devour the entire plant for its succulent tissues; but makes the fruits attractive to birds to the end that the seeds may be scattered. Chestnuts form an important food reliance for squirrels, which also secrete many that they never return to devour, and which may germinate and develop into forest trees.

To protect the fruit from ravage until fully ripe, nature has devised the bristling bur that answers its purpose as efficiently as the armor of any mailed knight of the Middle Ages.

So it is evident that nature is fertile in expedients to secure the universal dispersal of seeds. They appear to be everywhere, ready to germinate and develop into plants whenever the proper conditions of heat, light and moisture are supplied. The plowed field never remains bare, whether the farmer sows his seed or not; and cultivated land puts forth a superabundant growth of weeds that human hands never planted. Forests may be cut down and the land burned over; but the blackened earth will soon be verdant with underbrush, grasses, weeds, brambles and wild flowers. Rivers may be diverted from their courses to new channels, but the old water courses will soon be obliterated with a thick tangle of luxurious vegetation.—Mail and Empire.

A TRUE HEROINE.

J. A. M.

The world is always praising all the great folk of the time;
The artists and the sculptors and the orators sublime
But to earth's greatest heroine they seldom cast a look,
I'll tell you who she is at once—the blessed household cook!
We hear a lot of lauding for the man who goes to war,
For the doctor and the lawyer and the prophet's wondrous lore,
Engineer and decorator and the author's famous book,
But we seldom hear a word about the blessed household cook.
Perhaps you think she isn't worth the praise that I would give,
But without her ceaseless kindnesses, pray, how long would we live?
We all would soon expire if of food we ne'er partook
So I raise my hat in honor to the blessed household cook!
She saves the lives of thousands by her duties every day
Though she does it in a simple and unnoticed, quiet way;
And when I am an author I shall surely write a book
About the queen of womanhood—the worthy household cook!

Floriculture

By C. L. Flint, Oregon Agricultural College.

Success with flowers in the home depends largely upon the amount of time and care one is willing to give to their production. It consists of giving the plants those small attentions which seem so trivial in themselves, such as removing plants from the room while sweeping, or at least covering them with a cloth. The former method would be best as the temperature of the room would be quite suddenly changed at such a time and the growth of the plants checked. Allowing draughts of cold air to blow directly upon the plants is in the same list as is the neglect to wash off the leaves of the plants frequently.

If the plants seemed to have stopped growing examine the roots to see if they have grown so full as to fill the pots and fill it so completely as to form a thick mat of roots all about the inner side of the pot. To do this invert the pot on the right hand, allowing the stock of the plant to come between the first and second fingers. Hold the bottom of the pot with the left hand and tap the edge of the pot gently on some projection. The plant will then slip out, and if the roots appear as above described it is said to be root or "pot bound." This is an indication that the plant must be transplanted into a large pot. In doing this do not break off any of the roots or soil except those which lie at the surface. The soil at this point is apt to be covered with green slime and should be removed. Obtain a pot half or one inch larger in diameter than the one formerly used, put one or two pieces of broken stone or crock in the bottom of the pot for draining, put in a little loam so the plant will set about one-fourth to one-half inch below the rim of the pot and ram the loam, mixed with a little bone meal, about the plant with a small stick, then water, and undoubtedly your plant will begin to grow again.

The watering of plants is exceedingly important. The soil in the pot should not be saturated with water each day, but simply enough so that the soil will be moist. Syringing the plants on bright days will also tend to keep them in good health. A teaspoonful of ammonia in a gallon of water used once a

week will help to stimulate the growth of the plant and brighten the color of the foliage. If insects appear syringe the plant with soapy water or tea made from a few tobacco leaves. Thick-leaved plants, such as rubber trees, are benefitted if occasionally washed with water containing whale-oil soap.

There are no flowers more satisfactory for the amount of time one has to wait for the blooms than those grown from bulbs. Although it is best to plant them in October, it is not too late in many sections to have gaudy tulips and pure white narcissus nodding their pretty faces about your rooms. They may even be grown in excelsior or cocoanut fibre. If you use a good garden loam with a good deal of sand and no fresh manure you will undoubtedly have success. Plant one bulb to a four-inch pot or make a small box that will set in a window conveniently. Place the bulbs about one and a half their diameter apart and one-inch deep, then set the box or pot out of doors on the north side of the house; see that the place is well drained and cover them so as to exclude the light and the heavy frost. They should remain here from four to six weeks so they may develop root, as success with bulbs depends largely upon the amount of roots developed. After they have developed roots, bring them into the house at intervals of a week, and in that way one can have a succession of blooms.

There have been no plants produced to take the places of those which are grown by our ancestors. Such as zinnias, calendulas, daturas, balsam, annual pinks, candy tuft, wall flowers, larkspurs, petunias, gaillardias, snapdragon, china asters, salpiglossis, portulacas pansies, castor beans, poppies, stocks, elysiums; and such good running plants as scarlet runners, sweet peas, convolvulses, iponems, nasturtiums, bloom vines and cobaeas. Japanese hop vine makes an excellent cover for fences. There are any number of perennial flowers which may be used.

An interesting scheme of selection in growing annuals is to start with the A's in the seed catalogue and plant a certain number each year until the entire alphabet has been covered.

Growing the Potato

From Rural Spirit

The potato crop of the Pacific Northwest is growing in quantity and importance every year. Most of the land west of the Cascades in Oregon and Washington is adapted to its culture, the more sandy soils yielding big crops while in Eastern Oregon and Washington and in Idaho all the irrigated country as well as the dry farmed, including the semi-arid regions, produce potatoes of a high quality and in quantities that make it a very profitable crop.

Like any other crop it must be cultivated properly or failure will result. The method of growing potatoes is necessarily somewhat different on irrigated and non-irrigated lands, but the general principles are the same the world over. Since the potato is a deep-rooted crop and forms its tubers beneath the soil it stands to reason that it needs a good deep, well pulverized seed bed, whether in an irrigated or humid region. Where practical the ground should be plowed to a good depth in the fall. Alfalfa or clover turned under in the fall make a good preparatory crop. They supply organic matter in abundance and at the same time provide the necessary amount of nitrogen for the potato crop. Or a moderate spreading of manure may be turned under unless the ground is very rich or warm natured. If ground is not plowed until spring it should be stirred early and then let stand a few days to warm up. After a few days give the ground a thorough harrowing to level and pulverize it. Then lay off the rows with a stirring plow. This second working with the harrow, besides putting the ground in fine shape for seeding, destroys the crop of small weeds that has sprung up in the meantime. If the ground has been fall plowed it should be disked and then harrowed.

Where large crops of potatoes are grown it is the custom of many good farmers to plow in the potatoes, dropping seed every third furrow. If the ground is quite mellow and the furrows carefully turned this can be done with fair satisfaction, but as a general rule it is better not to cover potatoes with a plow, as by this system some are inevitably covered too deep, while others are left with not sufficient covering, so that the deeper covered ones often rot before they get through

to the surface of the soil, while the shallow covered ones are so near the surface that they will not secure sufficient moisture to insure a good germination. It takes considerably longer to cover potatoes by hand, but this is the surest and best way where only an ordinary sized patch is grown for home consumption and local marketing. On large fields it pays to use up-to-date machinery, both for planting and digging, rather than trusting to getting them properly covered with the plow.

Only first class seed should be used. No greater mistake can be made than to use the small, inferior potatoes that are not marketable. Feed them to the hogs and they are of some use, especially if first cooked, but to use them for seed is false economy and will result in much greater loss than the amount saved by not buying or saving first class seed. Good, sound, smooth, medium-sized potatoes should be used. They should be cut into pieces containing about two eyes each. Some people use the "seed end" for planting, but successful growers assert that this results in a great many small potatoes. The "seed end" should be discarded and the middle of the tuber used. Potatoes large at one end and small at the other or misshapen in any way should not be used. Like begets like in potatoes as surely as in anything else, and as it is the crop of smooth, medium-sized, well shaped potatoes, all about the same size that sells best on the market, seed of that kind only should be used.

The quantity of seed varies somewhat of course with the locality and quality of the soil. But as a general rule, three pieces of potato containing two eyes each are dropped in a hill if they are planted three feet apart, or two pieces if they are only eighteen to twenty-four inches apart. If they are covered with the plow an expert boy can do the dropping and keep out of the way of the plow, and can measure the distance apart by his eye and the distance he steps.

A Missouri potato grower who never uses the plow in covering his potatoes though he has his ground in the very best of condition, has the following to say about his method of planting, which is worthy of consideration:

"We have adopted a method entirely our own in the first few days' handling of potato

planting. They are covered very lightly with the hoe, one good lick being struck to cover them; another leveling blow being given to pulverize the dirt, smooth and pack it down evenly over the hill, and leaving the potatoes but about two inches under the soil. Keeping a close watch on the potato patch, we give it a good harrowing just as the plants are bursting through the ground to come up. This not only mellowes the soil again and kills all weeds, but it almost levels the furrows in which the potatoes were planted and gives them still another covering of about two inches, thus putting them at the proper depth for heavy production. The object of the first covering being light is to hasten the sprouting process by leaving them near the surface, and it also guards against the potatoes being so deep that they chill in the dampness of spring and rot before they have time to sprout.

"When the potato-plants come through the ground, they are given a second harrowing, and we frequently harrow them twice—cross-wise and lengthwise. This entirely fills up the furrows in which the potatoes were planted, still further mellowes the soil, and gives the potatoes the start of the weeds. The harrowing is followed in a few days by a close, deep cultivation, to thoroughly loosen the soil all around the plants. This second cultivation is much the same as the first, and after that the cultivator is run shallower and farther away from the hills, so the roots will not be disturbed, broken or damaged. Just before the third or fourth plowing, the patch is gone over by hand and hoe, the large weeds in and near the hills being pulled or cut out, as these are the very ones that steal away the soil's vitality so much needed by the plants and sap the moisture from the ground. At the third or fourth plowing the potatoes are laid by, the shovels of the cultivator being guarded away from the vines and the dirt thrown up against them to provide a roomy space in which the tubers may be developed. It should be stated here, that potatoes should not be given any deep cultivation after they begin to bloom.

"After this last plowing we use the five-shovels run only two or three inches deep. This not only continues the cultivation without plowing deep enough to injure the vines, but forms the dust-mulch, assists in the conservation of moisture, which is so essential to a heavy yield, and keeps down the weeds that spring up after laying the potatoes by."

Whether the potatoes are planted by hand or covered with the plow, early harrowing and frequent cultivation are necessary. Keep ahead of the weeds and keep the ground stirred lightly to provide the necessary dust-mulch that retains the moisture of the soil.

In irrigated regions the preparation of the seed bed need not differ from that described. If unusually dry the land should be irrigated before the crop is planted, but if the normal precipitation has occurred during the winter and spring months the crop may be planted without irrigation. It is not advisable however to plant the crop in dry, hot earth and then immediately irrigate it. Irrigation should precede rather than follow the planting. If the crop does not grow rapidly after planting irrigation should be provided as the appearance of the crop and the condition of the soil would indicate; a dark green or blackish color shows a lack of moisture on the part of the plants, while light green or yellowish tints indicate the presence of too much moisture.

The potatoes may be planted on a level field and they may be first harrowed, but as soon as plants appear begin turning the ground toward the plants, thus leaving furrows through which the water may run. Let the rows be wide enough apart to allow throwing up of broad high ridges, with deep narrow furrows between, so that the water can be let in a small stream for a long period rather than by means of a large stream flowing only a short time. This is because potatoes should never be flooded. Being a root crop the irrigation must reach the roots through the soil from the sides and below. The successive irrigations should be carried on in alternate rows; the second irrigation should be in the rows not used by the first and third in the rows used during the first. Cultivation should follow irrigation as quickly as the condition of the soil will permit, but only the lightest cultivation if any should be given after the potatoes begin to bloom, and if they are well irrigated and the soil holds moisture fairly well irrigation should cease as soon as the blooms are well open.

The object of this article is not to say anything about harvesting the crop, but it is in order to advise that after the crop is harvested the vines be raked and all refuse matter burned. Vines allowed to decay on the land tend to perpetuate any disease that may have been present upon the crop during the growing season.

ANNAPOLIS

Over 300 years have rolled by since that memorable day in the summer of 1604, when a little vessel sailed proudly up what is now the Annapolis River, bearing De-Monts, who, with all the ceremony befitting such an occasion, laid foot on the land of the new world, and unfurling the Golden Lilies of proud France, claimed the vast, unknown acres of a new continent as a heritage for the crown of a mighty nation, writes Donald Owen in *The Canadian Century*. The Annapolis Royal of today is not the Port Royal of three centuries ago, yet there is an interest that attaches to it, sufficient to warrant a brief portrayal of its present charm and wonder.

Annapolis Royal lies at the western extremity of the Garden of Nova Scotia—the far-famed Land of Evangeline. On either side rise the mountains, blue and misty, covered with a mass of evergreens that proves them to be as densely wooded as they were in the days gone by, when early Canadian history was in the making, and the stealthy Indian lay hidden in the recesses waiting for an opportunity to fall upon the settlement beneath. Flowing past the town and on through the valley is the Annapolis river, with its tidal waters that are ever on the ebb and flow.

The streets of the quaint town are large and in order; the residences of considerable size and stateliness and the grounds that cover them—spacious lawns and old-fashioned gardens—would be a credit to the fairest city in all Canada.

But it is not the town proper that affords the greatest interest; rather, it is old Fort Anne, which stands, overlooking the harbor in all the grandeur of the years that have passed and the glory of the scenes it has witnessed.

Here apparently the breastworks, like the other fortifications, are in a perfect state of preservation, and many of the buildings yet stand. To the West of the main square is the dungeon, where imprisonment must have been worse than death. At the South corner stands the old powder magazine, the walls of which are over six feet thick.

Looking through from the Sally Port that gives admittance to the Western moat and the outer breastworks, is to be seen the officers' quarters, still standing in all its picturesque stateliness. The building itself is fairly large. In the basement and below ground,

with only a flicker of light, are rooms that were used when an enemy was attacking or during the dark, cold days of the Nova Scotia winter.

After exploring the officers' quarters, the tourist will be conducted over the fortifications and onto the trench that was dug by one night by Captain Nickelson and his men, and where they took refuge on the following day. To the right is the road by which the Victorious British entered, and it was this same road which the French marched for the last time from the garrison of Port Royal, with their drums beating and their banners flying in the wind—for, as everyone knows, Nickelson allowed his brave foes to leave with all the honors of war."

On either side of 'Nickelson's Trench' is the silent city, where rests all that remain of many a hero who laid down his life in the course of duty to flag and country. Besides them, rest members of many families whose names are famous in the history of the province.

Gazing from the ramparts of the fort far down the beautiful river, one cannot but think of the events of the years ago; events that echo and re-echo in the history of our land. Of the fierce battles and the bitter strife that accompanied the several occupations of the town, and of the long, bleak winters, when provisions were all but gone, and the long expected relief from France had not arrived, and all seemed lost and hopeless, and with the poet, one can but wonder:

"Annapolis, do thy floods yet feel
Faint memories of Champlain's keel;
Thy pulses yet the deeds repeat,
Of Poutrin court and d'Iberville?"

—Ex.

FARMERS' FRIENDS

If we leave out of account the ubiquitous and combative English sparrows—not very kindly welcomed—and the few robins, whose habitiveness is exceedingly strong, with how many of our once common Canadian birds are our city dwellers familiar? Probably nature lovers who stroll along the wooded mountain side may see an occasional canary or oriole, or be gladdened by hearing a meadow lark, or the tattoo of a lone woodpecker. But where are the flocks of a few years ago? What has become of them? And does their disappearance bode good to the country?

Italy is reputed to be "a birdless country," the tiny songsters of the air having been ruthlessly hunted down for human food. It is said that even Canadian robins and black-birds have been hunted here for purpose of food. It can hardly be a profitable use of ammunition, even if we take no thought of the role the birds fill in agriculture and horticulture. Yet there are few of our wild birds which do not prove worth far more than the grain and fruit part of their food as allies of our horticulturists and agriculturists in fighting the numerous pests against which their skill and vengeance are pitted. Every native bird slaughtered is a loss to the farmer and orchardist. It is sad to reflect that so many thousands of beautiful birds have been sacrificed to sheer lust for killing something—so called "sport"—and that for such crime we must make compensation in due time. The birds destroyed, the insect pests increase. We did not appreciate our friends when they served us; now we spend hundreds of thousands in dollars and labor in the fight to keep under subjection the insects and grubs and slugs and worms that would have been the natural food of our cheerful—murdered—songster allies.

We need the help of the wild birds. They should be protected and encouraged. The boys and girls should be stimulated to interest in them, other than using them to decorate their hats. Never violate a bird's nest. It is a poor, mean "pleasure" to slay a robin, or to clot with blood the beautiful plumage of the red-headed wood-pecker, who hunts out the grubs which are killing the trees, and makes his meal on them. You will find far more amusement in studying the birds as friends than in shooting or stoning them. How much do you know of even the most familiar of them? Do you know that the sparrow jumps or hops along, while the robin trots? Watch the robin looking for worms. See him cautiously step forward with head cocked on one side as he listens to the worm underground! One swift peck and a vigorous pull, and it only remains to dispose of the worm so as to make its transportation to the nest easy. The camera or a pair of sharp eyes are worth more than a gun in studying birds. Try it, boys. And when your comrades are inclined to hurt the birds or annoy their nests, be their friends, convince them that the birds are the friends of mankind, and that they contribute to the pleasures of life.

Fruit Crop Report

Under date of June 20th, the B. C. Fruit Growers' Association reports as follows:

Under instructions from the Deputy Minister of Agriculture the Secretary visited various points in the Northwestern States on fruit crop conditions between June 3rd and 12th. The Puget Sound berry district, including Vashon Island and Puyallup sections, Wenatchee Valley, the Spokane country, Lewiston-Clarkston district, Yakima Valley and the Hood River district were visited personally. The principal wholesale and marketing concerns in Seattle, Spokane, and Portland were also interviewed for information.

Mr. J. Forsythe Smith of Vernon, appointed as Markets Commissioner under the Department of Agriculture, to succeed Mr. J. C. Metcalfe, accompanied the Secretary to get in touch with the various districts and their marketing organizations, it being the intention of the Department to have the Markets Commissioner cover American territory this year as well as the Prairies.

An effort was made to get definite information on prices of supplies and labor, the economic conditions generally affecting the fruit business, marketing organizations, the prospective yields and dates of shipment of the various crops, the transportation facilities for moving the crop, new freight rates, and types of orchard packing houses, etc.

Prices of supplies—It was learned that wrapping paper, box packages and crates, nails, praying materials, etc., could be purchased by the fruit grower at an average of from 30 to 40% cheaper than is paid in British Columbia. The reasons for this are being investigated under instructions from the Executive, and any useful results of the investigation will be reported to our members. The cost of labor seemed also to be considerably cheaper than in British Columbia, perhaps 30%, as against 25% cheaper than in British Columbia two years ago. We believe the fruit growers are securing better trained help and a more plentiful supply,

which may be entirely due to older and more settled communities.

Economic Conditions—Because of the coming presidential elections, a general trade depression occurring over the whole of the United States and particularly the re-action from an era of speculation at its height four years ago in the Northwestern States, economic conditions are unsatisfactory. Money is tight and business is being conducted on remarkably low margins. This influence will particularly result in lower prices and curtailed markets in the United States, causing the Northwest generally to look to Canada, to a degree not appreciated on this side, for a remunerative outlet. The secretary was told frankly by managers of many of the principal concerns of their plans to extend their outlet in the Canadian prairies, due in part to economic conditions.

Organizations—Fruit Growers' Organizations have not progressed remarkably since the last big crop two years ago. The strawberry crop on Vashon Island and the Spokane country are marketed almost entirely without proper co-operative organization (as outlined in our strawberry report of June 13th). In the Wenatchee Valley the crop of large fruits will be in strong hands. The same is true of the Lewiston-Clarkston district, in Hood River, and to a great extent in the Yakima Valley. The reverse is the case in the Spokane County, which will have a large crop this year. Many of the smaller districts are joined up with the Northwestern Fruit Exchange of Portland, which seems to be a high class, though costly, machine capable of securing wide distribution and good prices if they are to be had. Southern Idaho districts are practically in very poor shape; a few local organizations, but these are not strong enough to handle the crop capably. Southern Oregon crop is in the hands of the Northwest Fruit Exchange and would be therefore in satisfactory shape. On the whole, while organization has progressed somewhat, there is enough fruit in irresponsible hands to materially satisfy the market.

Transportation—The supply of cars on the American side will in all probability be reasonably adequate, as a general depression of trade always results in a plentiful supply of cars. The Yakima Valley has one new railway this year; it will be a very important factor in helping to move its huge crop. There has been no material change in freight rates and in this respect the information we

have our members last year on freight rates from American points to Canadian markets stands as substantially correct. The new Dominion Express rate of \$2.00 per 100 pounds from Spokane to Lethbridge, Calgary, Medicine Hat, Moosejaw, Regina, Brandon and Winnipeg will, however, be of material assistance in promoting the movement of berries from all Washington points.

CROP PROSPECTS.

Strawberries—Hot weather is bringing this crop on even more rapidly than expected and prices will undoubtedly be low, though not likely below \$2.00 to the retailer at all points mentioned above, also Vancouver and Victoria. Seattle Commission men seem disposed to protect Coast markets by consigning bulk of crop to the Prairies. The strawberry crop is in irresponsible hands and all markets may fluctuate considerably. We recommend B. C. shippers to put up good stuff and get it into the country towns, local B. C. markets, canneries and jam factories.

Raspberries—Our principal competitor is the Puyallup district, which has a very strong organization; they have already sold 40 car loads of berries at \$1.40 per 20-pound crate to a house in Minneapolis. Some of this will come north into Canada; their berries move heavily about July 10th to 20th, followed closely by blackberries and loganberries, both of which are also a very good crop in the Puyallup district. In view of the very short crop in British Columbia this year we believe local markets should take up all our crop at very good prices.

Sour Cherries—Very little grown on the U. S. side, and mostly over before ours come in. The British Columbia crop seems to be a moderate one and so should bring high prices as in previous years.

Sweet Cherries—The crop on the U. S. side as in British Columbia, has dropped heavily and estimates of the main crop which will be moving shortly, are now only 50% of previous estimates. We believe the market will remain firm throughout the season.

Apricots—After California apricots are over, Wenatchee is the only important shipping district; they will have from 60 to 75 cars this year, a number of which at least will roll towards Canada, particularly Vancouver, Calgary and Winnipeg. They will probably sell on a basis of about 60c F. O. B. Wenatchee.

Peaches—As the full crop seems to be light all through the Northern States, except

in the extreme west, the shippers in Washington hope for good prices. Colorado, however, has around 1000 car-loads to move; the Wenatchee district hopes to ship 500 cars; the Yakima Valley is figuring on from 1200 to 1500 cars. There will be peaches in other districts, but they do not materially affect the situation for B. C. shippers. If the crop of tender fruits in general in the middle western States is decreased by hot winds, frost or other unfavorable weather, as is usually the case, it is likely that a great many peaches will go into consumption from the Northwestern States. We are certain that fairly low prices at least will rule, especially as in both Wenatchee and Yakima there is absolutely no other facilities such as canneries or driers to take care of over-ripe fruit.

Plums and Prunes—The crop of both plums and prunes in the coast districts of Oregon and Washington is small and growers are much disappointed. Prices for drying will in all probability be high and it is therefore unlikely that many Willamette Valley prunes will reach the prairies this year. The set of plums and prunes in the Interior valleys is, however, quite heavy and Southern Idaho has reported as having a crop of about 400 cars or about the same as two years ago. If this crop materializes it may have a depressing influence on the market for B. C. prunes which come in at the same time, especially as Southern Idaho has no efficient organization.

Pears—Pears in the Northwestern States have dropped in rather a disappointing manner, especially on the Coast. We believe that the crop will continue in the Interior districts, resulting in a less than average crop of pears from all Northwestern points, as will be the case in British Columbia. If California pears leave the market in satisfactory shape, prices for same should continue to be satisfactory, but operators, in view of their heavy losses last year, will be shy and this may affect the market on the U. S. side to a certain extent.

Crab-apples—Montana has reported to have a fair crop; Colorado the same. British Columbia has a very fine crop. In view of a likely increase in consumption, due to the increased population of the prairies, it is probable that crab-apples will move readily at satisfactory prices.

Early Apples.—These are generally a good crop; much will depend on the extent to which the apple crop in the middle States

hangs on through the "June drop" and adverse weather conditions. It is yet too early to do anything more than to say that the Northwest crop of early apples, will be fairly good. The crop in British Columbia, which as a whole, will be a good one, will probably move forward at prices a little higher than those of two years ago.

Late Apples—The general conditions throughout the Northwestern States are very similar in districts of similar climatic characteristics in British Columbia. The crop of most winter varieties seems to be a full one with the exception of Winesaps in the Wenatchee, Yakima and Arkansas States. Spitzenbergs have set heavily. We believe that there will be a considerable drop in Washington territory and in British Columbia within the next ten days, which will materially affect yields. It is quite likely, however, that the total crop of apples in the Northwestern States alone will nearly reach 10,000 cars.

Storage Facilities for Late Apples—Hood River is the only district in the Northwestern States which can store any considerable portion of its crop if necessary. They expect 800,000 boxes this year, and can store 550,000. The Yakima, Wenatchee and other districts have no more storage room than two years ago. In British Columbia there have been a number of houses erected which will carry perhaps 25% of a full crop if necessary. The general absence of storage facilities at shipping points will be therefore a factor in the movement of the crop this year, and will do much to compel the movement of the Northwestern crop to the consuming districts and its sale to the jobbers in the fall months. We would expect, therefore, to see prices following somewhat the same range as two years ago.

In general the Northwestern States have a crop around 20% greater than that of 1911. Their organization is somewhat better; their pack will be an improvement, but on the other hand financial conditions on the U. S. side and lack of storage facilities at shipping points and possibly severe competition from home grown apples of the Middle States will tend to reduce prices.

The obvious lesson of the present situation is that the most perfect organizations will this year bring the best results to British Columbia growers. We believe that there will be enough boxed fruit to supply the market at moderate prices. We expect that fruit in weak hands will not do as well as it has in previous years.



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PREMIER OF BRITISH COLUMBIA

Editorial

THE CANADIAN FLAG.

Under date of June 7th, a dispatch from Ottawa informs us that:

"There has been some controversy of late in the capital as to the actual flag of Canada. The matter is settled by the following dispatch received from the secretary of state for the colonies by His Royal Highness the Governor-General:

"I have the honor to transmit to Your Royal Highness a copy of a letter in regard to the flag which should be used by private persons who are British subjects.

"I should be glad if you would be good enough to cause the public to be informed that the Union flag is the national flag of Canada as of all other parts of His Majesty's dominions and may be flown on land by all British subjects, and that the red ensign with the arms of the Dominion of Canada in the fly is intended to be used only by Canadian merchant vessels.

"I have the honor to be sir, your Royal Highness' most obedient, humble servant,
"(Signed) L. Harcourt."

This dispatch excites our curiosity and interest in the same manner as would the sudden hoisting of a storm signal during calm weather and a cloudless sky. We were not aware that any question as to what constituted the "national flag of Canada" was particularly occupying the public mind of this country at the present time, and it would be interesting to know just what subtle influences have been at work in order to cause the question to be asked of the Secretary of State for the Colonies; also whether the questioner gave any intimation as to the kind of answer he desired. It would also be more or less enlightening to know whether the above communication was addressed to His Royal Highness, the Duke of Connaught, personally, or to His Excellency, the Governor-General of Canada, officially. In any case, we question the right of the Secretary of State for the Colonies to hand out an arbitrary ruling on the use of flags in this country, and in the light of past events in this connection, such an act does not "settle" anything affecting Canada. While a Canadian flag is always a British flag, a British flag is not

always a Canadian flag, and the Union Jack, being now an Imperial emblem, has long since ceased to be simply a "national flag."

To be fair, however, it should be noted that Mr. Harcourt only intimates that the union flag (that is, the crosses of St. Andrew, St. George and St. Patrick which form the Union Jack, without a red, blue or white fly) may be flown by Canadians on land, but he is careful not to say that our own recognized national emblem shall not be. This is doubtless the wish of certain individuals, however, whose vision of the future only enables them to see strength and safety in the co-ordination instead of the co-operation of the British Empire. Many Canadians would rather see a single maple leaf on the fly of the national banner than the arms of all the Provinces, but such an improvement will only come with the growth of Canadian public sentiment in its favor and not by any uninspired ruling from Downing Street.

In discussing this question, it should be borne in mind that the red ensign of Great Britain was first designed for use only by the



CHERRY BLOSSOMS AT CHILLIWACK



AT THE TORONTO EXHIBITION

British merchant marine. But it gradually became the popular flag on land and by long continued use has become a recognized land flag as well. Likewise the Canadian ensign was first designed and adopted for the Canadian merchant marine and by the same token has long ago become the recognized national flag of the Dominion, both on land and sea.

Some years ago there was an epidemic of abuse launched against the Canadian flag by certain persons whose Canadianism had not developed sufficiently to enable them to comprehend the national status and spirit of this country.

In a communication to the Vancouver daily papers dated January 15th, 1908, and published the following day, the present editor of this magazine said in part:

" . . . We regret to see prominent "Canadian newspapers giving publicity to a "contention which is not well founded and "which is calculated to check and discourage "the growth of a healthy Canadian national "sentiment, which is so much to be desired in "welding together into one harmonious whole "the various heterogeneous elements which "make up the population of our vast Dominion. At sundry times during the past few "years, we have read in the public press a "lot of balderdash about the Canadian ensign "having 'no official status,' evidently written "by persons who seem to consider it a duty "which they owe to their adopted country to

"persuade us that we are nobody anyhow, "some of whom do not even know a Union "Jack when they see it. The red ensign of "the United Kingdom of Great Britain and "Ireland, which is composed of a red field "with the crosses of St. Andrew, St. George "and St. Patrick in the upper corner next to "the staff, is often erroneously called the "Union Jack. But the Union Jack proper "is formed by the union of the crosses of St. "George (red on a white field), the diagonal "cross or saltier of St. Andrew (white on a "blue field), and the diagonal cross or saltier "of St. Patrick (red on a white field), and "nothing more.

"The Canadian Ensign is composed of a "red field with the Union Jack in the upper "corner next the staff, and the arms of the "Dominion of Canada in the field. . . . "Like the gradual development of other national emblems, long continued use of this "flag has given it an official status both on sea "and land, and any attempt to minimize or "nullify that status is as fruitless as to endeavor to turn backward the hands of progress on the dial of time.

"The artificial Imperial Federation dream "reflected through the public utterances of "Mr. Joseph Chamberlain and his devotees is "but a crude and hazy nebula, compared "with the glory and splendor of that Federation which a natural expansion and unfolding of the national aspirations of the various "self-governing peoples will undoubtedly

"bring about, viz., one grand United Empire of Nations. And why stifle that inspiring national pride and sentiment, that life-giving blood which now flows from the great pulsating heart of the nation, through every artery of social and commercial activity to the remotest extremities of our Dominion?"

" . . . The vicissitudes from time to time passed through by the Canadian Ensign abroad, culminated a few years ago by a British Consul in South America imposing a fine on the captain of a Canadian schooner for persisting in flying the Canadian national emblem when ordered to haul it down. This incident was brought up in the Canadian Parliament, a protest was made to the Home Office, and the ill-advised Consul in question was promptly 'reprimanded.'

"Then, when the body of the late Raymond Prefontaine was being brought home, the British Admiralty presented the Hon. Rodolphe Lemieux, who accompanied the remains to Canada, with two Canadian Ensigns; one to fly half-masted on His Majesty's ship Dominion, which conveyed the body across the Atlantic to this country, and the other to cover the casket.

"If our Ensign has no status outside the merchant service, why was it flown by order of the British admiralty from the mast of His Majesty's ship Dominion on that occasion? And if it has no status on land, why was it used by order of the same high authority to enshroud the casket of this distinguished statesman when laid to rest in the bosom of Mother Earth?

"Surely when the Mother Country cheerfully honors and respects the national emblem and laudable aspirations of the Canadian people, it is time for carping criticism and ignoble cavilling to cease within our own borders."

Since the writer first penned the above, four and a half years ago, many distinguished Canadians have rallied to the defence of our national flag; and, from the mass of additional data produced, we find no legitimate argument to warrant us in deviating from our original position on the subject of Canada's national flag as adopted by the Fathers of Confederation.

A distinct, national, Canadian flag we have and will hold, as long as the Dominion stands. With the increase in the number of provinces, the present distinguishing badge will doubtless have to be changed, and we

can think of nothing better than to return to the single Maple Leaf on the red field, which was in use on Canadian flags as far back as 1812.

THE RETIRED FARMER.

We have been impressed by the remarks of Prof. W. C. Palmer, of the North Dakota Agricultural College, with reference to the course pursued by so many farmers who have reached the retiring age.

Retiring from one's work is one of the most serious steps that a man can take. Especially is this true of the farmer. Usually it means moving to town. Life in town is entirely different from life on the farm. One accustomed to farm life can hardly adapt himself or herself to town life at that period of life. This results in being out of touch with one's environment, in the absence of activities to keep one occupied. From being an important factor in the farm community one often becomes a negligible one in towns or even worse—a knocker.

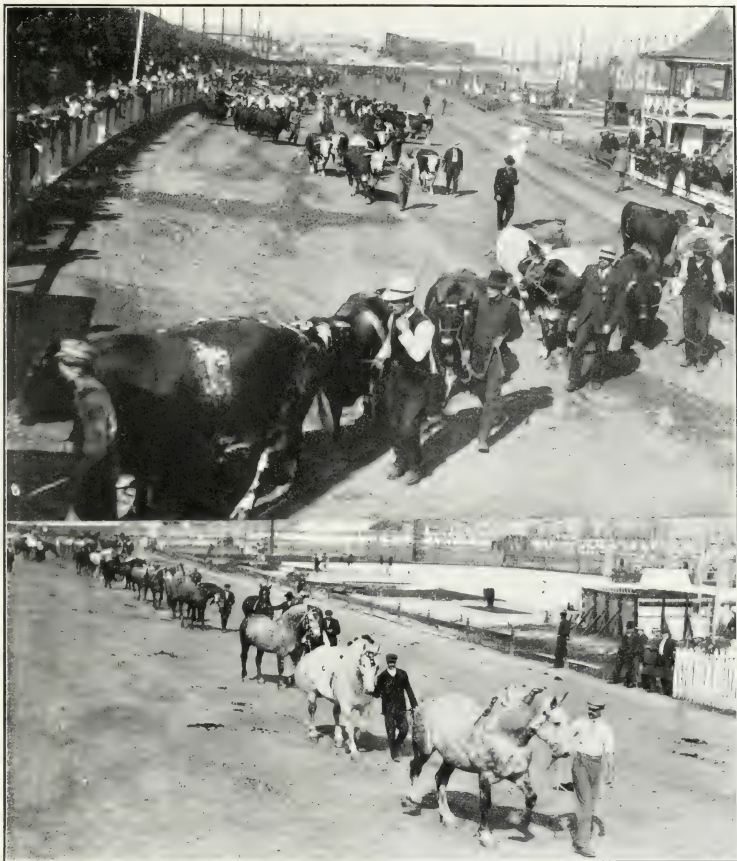
Why move to town? The reasons given for moving to town are many—educating the children, modern conveniences in home, less work, etc. The schools in towns are as a rule better than those in the country, but the reason they are better is that the town people tax themselves so as to have the money necessary to maintain a good school. By consolidating the schools and putting up the school tax as high in the country as in the city, just as good schools can be provided in the country as in the town.

The modern conveniences can be had in the country now as well as in the town, and usually at a less cost.

Less work in town—less work of some kinds—but after all no one can be happy and healthy unless the mind is occupied. The one who is used to active, muscular work for a good many years will not remain healthy without some exercise.

A good way for a farmer to retire is to select a lot of five to fifteen acres on the old farm and build on it the modern house, a small barn, also with modern conveniences, and a poultry house. Here one can live the life that one is used to in the way that has become second nature to one. Here there will be something to hold one's attention and to supply some work to take the place of the accustomed activity.

The school problem can be solved by consolidating the schools. In this way as good



THE STOCK PARADE, TORONTO EXHIBITION

schools can be had in the rural district as in town. In fact it will be a better school as it will be in closer touch and harmony with the farm and farm life.

In most cases it is a sad mistake for the farmer to retire to town, and especially so when the things that he moves to town for can be had on the farm and with all the advantages of the country in the bargain.

TOWN-PLANNING CONGRESS.

It is fitting that in Winnipeg, where "East meets West," a movement of all-Canadian

interest should have its beginning. It is now definitely announced that the first Town Planning Congress in Canada will be held in Winnipeg on July -5, 16 and 17, and will, in fact, of an international character. The sessions are to be held in the auditorium of the Industrial Bureau. The Duke of Connaught has consented to speak at the congress, which, during its sessions, will be addressed by many prominent men from various parts of the world, and one lady. Among the speakers will be Frederick Law Olmstead, of Boston, for three years president of the International Town Planning Congress, on "The

Four Cardinal Points of Town Planning;" Walter D. Moody, managing director of the Chicago Improvements Commission, on "The Improvement and Development of Large Cities;" B. Antrim Halem, town planning engineer of Philadelphia, on "Some of the Fundamental Problems of Town Planning;" Guy W. Haylor, of London, Eng., on "The Essential Elements of City Planning;" Louis Betz, of St. Paul, on "The City Beautiful;" Mrs. Franklin P. Ians, on "Housing of the Working Classes;" Herbert Vivian, M.P., of London, Eng., on "Decentralization and a Provision of Working Class Modern Suburbs;" Raymond Unwin, London, Eng., on "Arts and Crafts of Town Planning;" Barry Parker, Letchwood, on "The Art of Building a Home;" Duke of Connaught, on "Housing;" and A. A. Shurtleff, of Boston, on "Beautifying the City." A number of medical officers of health have promised to give a series of short papers on "Slums: Their Effects, Prevention and Their Cure."—Canadian Finance.

PACIFIC COAST ASSOCIATION OF NURSERYMEN.

Mr. R. Layritz, who has returned from Salt Lake City, Utah, where he attended the convention of the Pacific Coast Association of Nurserymen, a trade organization west of the Rocky Mountains, made up of the leading nurserymen of California, Oregon, Washington, British Columbia, Idaho, Montana, Colorado and Utah. In consideration of the growing importance of the fruit growing, and horticultural interests in general, and the nursery business in particular, which those kindred interests play in the progress of British Columbia, Mr. Layritz, as Vice President of the Pacific Coast Association of Nurserymen, has been successful in getting the consent of this strong body to make British Columbia their meeting place in 1914. Either Victoria or Vancouver will be decided upon as the meeting place and will have the honor to extend their hospitality to this strong body of horticulturists.

1911 CROPS.

The farmers of Western Canada have never had to bring their crops through more ill-assorted weather experiences than during the past twelve months, but in spite of these ill-favored conditions the farms of Western Canada produced last year by far the great-

est crops in the country's history. Manitoba alone yielded 61,058,786 bushels of wheat, 73,786,683 bushels of oats, and 29,000,000 bushels of barley, while the yield for the three prairie provinces, Manitoba, Saskatchewan and Alberta, is computed to be not less than 177,000,000 bushels of wheat, 182,000,000 bushels of oats, 34,000,000 bushels of barley, and 6,000,000 bushels of flax. The purchasing power in money, when the 1911 crop is all marketed, gives the enormous cash value to the country of between \$25,000,000 and \$30,000,000.

KING'S BIRTHDAY HONORS.

Our congratulations are extended to the following, who have been recognized in the King's birthday honors for 1912: Richard McBride, premier of British Columbia and Rodney Palen Roblin, premier of Manitoba, are made knights commander of the Order of St. Michael and St. George, while John McDougald, of the department of customs, and Professor James Melville Macoun, of the department of mines, are created companions of the same order. Joseph Dubuc, late chief justice of Manitoba, is created Knight Bachelor, and William Henry Walker, of the external department, has been admitted to the imperial service order.

VANCOUVER EXHIBITION.

The Vancouver Exhibition Association are making a strong bid this year for district displays.

To induce Districts or Agricultural Societies in the different portions of the Province to exhibit, the Directors, desiring to assist the different localities in advertising their agricultural capabilities, have endeavored to be as liberal as possible with their prizes, and trust the Districts or Societies will take advantage of these offers to use every endeavor to make creditable exhibits.

For the best District or Agricultural Society exhibit of fruits, grains, grasses, dairy produce, roots and vegetables, the products to be grown within the Districts entering the same for competition:

First Prize	\$400.00, with Diploma
Second Prize	300.00, with Diploma
Third Prize	200.00, with Diploma

To any District or Agricultural Society exhibiting in this competition, \$100.00 will be given toward the expense of collecting and



AT THE TORONTO EXHIBITION

making the exhibit, providing they have not won a prize.

Comparison as to the highest possible points that can be obtained:

	Points.
Fruits, fresh	300
Fruits, preserved, syrups, jellies, etc.	200
Grains and agricultural seeds	250
Roots and vegetables for table	250
Forage plants	250
Dairy products	250
Roots and vegetables for stock	250
Arrangement	250
	2000

For the information of the exhibitors it was decided that the dairy products (250 points) be described as follows: Butter, 100 points; cheese, 60 points; bacon, 40 points; honey, 30 points; and eggs, 20 points.

In grains and agricultural seeds it was decided that the amount exhibited should not be less than 25 pounds of wheat, oats, peas, rye, barley and corn, and that for grass seed and clover (bottles or otherwise) the mount shall not be less than one pint.

Entries for District or Agricultural Society exhibits must be mailed to the Secretary on or before July 15, 1912.

A number of half-tone cuts of the grounds and buildings will be found in this number, which gives a fair idea of the beautiful situation of Vancouver's exhibition grounds.

DIVERSIFIED FARMING.

In a special report to the Department of Commerce and Labor, Washington, D. C., Consul-General Jones, of Winnipeg, devotes considerable space to the necessity for diversified farming throughout Western Canada. He says:

"Western Canada presents the peculiar anomaly of a wonderfully productive country importing most of its food products. Although the prairie provinces have a most productive soil, capable of producing nearly all kinds of farm products, they have not been able to supply the demands of their population, as the single purpose of the Western Canadian farmers seems to be to produce as much wheat as possible.

"No statistics are available showing the enormous importation from the United States and Eastern Canada of food products, but most of the poultry and eggs used in Western Canada come from the eastern provinces and the United States, and the largest section of Western Canada faces a dearth of dairy products. During 1911 the milk shortage became so acute that the border states of the United States were called upon to supply the deficiency. It is estimated that the imports of milk for the city of Winnipeg alone between November and February average \$45,000 a week in value. The United States was also called upon to supply potatoes, for although these are the most produc-

tive crops in Western Canada, they were not raised in sufficient quantities to meet the demand. With a population of 1,700,000, Western Canada is not producing enough to supply its immediate needs. It depends upon outsiders for millions of pounds of bacon and mutton, and for weeks at a time the market has been supplied with frozen mutton from Prince Edward Island.

"During 1911, the provinces of Alberta, Saskatchewan and Manitoba produced 11,141,207 pounds of butter, valued at \$2,573,671 and 660,725 pounds of cheese valued at \$84,691. These provinces also produced 14,044,000 bushels of potatoes, valued at \$6,303,000; 247,000 bushels of turnips and other vegetables, valued at \$2,931,000; 2,429,000 tons of hay and clover, valued at \$5,892,000, and the province of Alberta produced 15,000 tons of sugar beets, valued at \$75,000.

"While Western Canada has been able to meet the demands of its people for beef, the disappearance of the great cattle ranges will soon force the importation of beef."

In quoting the live stock receipts at the packing house at Winnipeg from the provinces of Alberta, Saskatchewan and Manitoba, Consul-General Jones points to the steady decline and the rapidly increasing prices. He points out that only 85,000 hogs were shipped to the packing houses last year, as against 145,000 three years ago, while the price has gone from around

\$6.85 to \$8.85 per 100 pounds. The receipt of sheep last year increased from 13,000 over the previous year, but there was no increase from the western provinces, the additional sheep having been brought from Minnesota, and the price averaged \$4.89 for the season.

RECKLESS FINANCE.

What is commonly called "wild cat" schemes is not infrequently placed on the market in Canada, and, strange to say, the most guilty individuals in this connection are not usually native Canadians or men who have become thoroughly Canadianized by long residence in this country. But seventy-five per cent. of these offenders are comparatively recent arrivals from the old land who have mistaken the freedom of the new world for a license to "put it all over" their unsuspecting friends from the old country.

On the subject of "Reckless Finance," the following quotation from *The Standard of Empire* is most reasonable and sensible:

"It is becoming the fashion just now for well-meaning friends and admirers of the Dominion of Canada to make pontifical statements to the effect that the country's worst enemies are those of its own people who foist worthless flotations and investments upon the innocent investing public of Europe. 'Canada is all right,' these com-



EARLY ARRIVALS AT THE TORONTO EXHIBITION



JUDGING STOCK, TORONTO EXHIBITION

mentators rather unnecessarily assure us, 'but infinite injury is being done to her prestige and credit by these wild-cat promotions.' Such statements form convenient texts for the speeches of chairmen in introducing lecturers who deal with Canadian subjects, and for after-dinner oratory. The egregious suggestion was even mooted in high places that a Royal Commission be appointed to inquire into Canadian 'wild-cats,' and the scarcely less egregious suggestion that 'Canada really ought to take steps, in her own interests, to put a stop to this sort of thing' is becoming a commonplace. The first of these suggestions was very properly dismissed pretty curtly by the Prime Minister; the unreasonableness and impracticability of the second becomes apparent directly it is examined.

"In this connection one or two simple statements fall to be made, and we propose to make them, without apology or elaboration. Canada's progress today is unprecedented in the history of the Empire, or of the world. The progress of the United States at the same period of that country's development was small and slow by comparison. There is probably no single country in the world in which the judicious investor can obtain so good a return on his money as he can obtain today in Canada.

The country's natural resources and present development are so enormously greater than its available capital, that we may say without hesitation that the present rate of British investment in Canada may with safety and profit be not only continued but very largely increased, year by year, for many years to come. Capitalists and small investors who at present have funds sunk in various foreign countries might with advantage and profit to themselves transfer every penny of those funds to properly selected Canadian investments, and thereby, at one and the same time, enlarge their incomes and enhance the value and security of their capital. But to be brief and plain, there are three-card tricksters in Canada (and in London, trading on Canada's name), as in every other civilized country on earth. There are men who would turn aside from the most attractive genuine enterprise in the world to make money by promoting a "wild-cat" or worthless venture. Everyone who has attained to years of discretion is supposed to be aware of this. Every person entrusted with the investment of money ought to know it, and deserves to lose his money if he acts without regard to such truisms. And, in dealing with Canadian investments, there is less excuse for being drawn into such ventures than there is where most countries are

concerned, because here the proportion of really first-class and very profitable openings for investment is so strikingly large and diversified.

"But—and here we desire to use special emphasis—there is in the existing condition of affairs one serious fault to be found. There is one kind of improvement for which the British investor has a right to look. It is this: No promoting or issuing house of standing in Great Britain is justified in lending its name, or allowing its credit, to be associated with the flotation in this country of Canadian concerns which it has not thoroughly investigated. The same remark applies, of course, to the enterprises of other countries. Canada is within a week of England. Its natural wealth is incalculably great. Its government and social and commercial organizations are admirable, judged by the highest British standards. But no organization can prevent a clever adventurer crossing the sea from Canada and offering an unsound venture to investors in England. Human nature being what it is, such things must be. Let him offer his goods in New York. If his proposals are attractive, the issuing house applied to will at once despatch a trusted investigator to look into his enterprise on the spot. If it stands this independent test, the house offers the venture to its clients. But not otherwise. The same rule should hold in England. And we have no hesitation in saying that where an unsound enterprise is floated by a house of repute in this country the blame and discredit lie, not at all with Canada, and far more with the issuing house, than even with the original promoter. The individual who invests money without investigation brands himself a foolish person. The individual, or group of individuals, who invite others to put their money into enterprises which they, the proposers, have not thoroughly investigated are something worse than foolish. Let the investing public bear that in mind, and choose their guides accordingly. The results will be beneficial to the investing public, to Canada, and, in the long run, to all financial houses which handle Canadian investments; for the wisely-conducted concerns which now are scrupulous in these respects are being seriously injured by their less reliable rivals who do not take these precautions."

STRAWBERRY-ROOT WEEVIL.

"No really satisfactory treatment is at present known for this serious pest," says Assistant Entomologist A. L. Lovett, of the Oregon College, discussing the attacks of the strawberry-root weevil on beds in the Freewater-Milton district.

"Fields do not generally begin to show the attacks until the beginning of the third season, and those planted in hills not so soon as those in the mat system. The Magoon and Clark Seedling are especially prone to attack, while the Gibson seems practically immune. Where fields were watered from the Hudson Bay ditch they were usually infested, though often absolutely free if watered from private wells.

"This indicates that the beetles from infested patches up stream crawl into the ditch and are washed down to fields below. As they can not fly, and can only crawl, outside agencies must be used for transportation any great distance. They feed and crawl at night, resting in darkened or sheltered nooks by day.

"Since the adult beetles feed on the foliage, spraying with one of the arsenical poisons would seem effective. But two factors argue against this: the beetles emerge and commence depositing eggs when the berries are in full fruit, and they have a wide range of host plants and are not heavy feeders, so avoid sprayed foliage, either feeding on other crops or waiting for new growth.

"I am trying out different materials with a view to repelling or killing the grubs in the soil. It is a great problem to obtain something which will destroy the grub and yet not injure the tender plant. One Freewater grower reports success in using ashes and lime on infested fields and then flooding with water. Another grower plans to flood the soil this fall after the picking season, and keep the plants submerged several days. This should kill the grub, but just what the possible effect on the strawberry plants and young fruit trees will be is yet to be seen. The treatment would, at best, be confined to irrigated districts, which do not include all the fields infested.

"Since the beetles can not fly, the barrier method may be used. A field of about an acre and a half is enclosed by a low fence such as, it is hoped, will keep the pest out. The weevil is a serious pest with many factors making its control a complex problem. We hope eventually for satisfactory solution, and are not discouraged."

DON'T KNOCK.

Always keep in mind that every knock you give your home community recoils with greater or less force upon yourself, and that in every benefit that follows a boost you also have a share. If we would expand and prosper, we must work together for the common good. The opportunities of the country fair should appeal to every farmer, and yet there are some who always have a hammer out; what then should an international exposition, right in the very heart of Western Canada, require in the matter of your aid and co-operation through exhibiting the best that you have grown? And what about

journey through life easier and happier, and what is best for the country, yes, the world, as a whole? God loves an honest man; the Bible doesn't place a knocker anywhere near the throne.

Nearly every district throughout Western Canada—in every one of the four provinces—is arranging to be represented at the great International Dry-Farming Congress at Lethbridge, Alberta, October 21-26 next.

FIRE BLIGHT.

In some parts of the Okanagan Valley, British Columbia, fire blight has developed this season and the Provincial Department



INDUSTRIAL BUILDING, VANCOUVER EXHIBITION, AT NIGHT

the man who criticises, when an exposition is made international-world-wide in scope, with displays of the best that nearly every country under the sun produces—and it is brought right to his very door, with its thousands of attending official representatives, progressive agriculturists and captains of finance and transportation, who travel thousands and thousands of miles to ascertain what are his requirements, what they can do to make his

of Agriculture are taking active steps to stamp out the disease.

This is one of the most stubborn blights that the fruit grower has to deal with and heretofore British Columbia has not experienced much trouble with it. It will, therefore, be in the best interests of all concerned that the fruit growers co-operate with the department to the fullest extent in order to minimize the damage.

Our Ottawa Letter

FROM OUR OWN REPRESENTATIVE AT THE NATIONAL CAPITAL

Caterpillars have done a great deal of damage in and around Ottawa to fruit trees of all kinds this year, as well as to ornamental trees in the residential streets. The same may be said of this section of the country generally. On every road leading into Ottawa fruit trees that started the season covered with foliage are showing the bad effects of neglected spraying. Hundreds of trees have been utterly ruined this year, so far as foliage and fruit are concerned. In my own little garden plum and apple trees began to show very early indications of caterpillar ravages, and I started clearing off the nests and destroying the noxious insects by sweeping them off the boughs into tins wherever they could be seen and cremating them in the kitchen range. It did not take long, and was easy work. Three days successively I followed up the enemy, and on the fourth day only half a dozen new nests were to be found. After that, very little trace of the caterpillars was to be discovered on any of the trees. People who did not notice the scourge in time had their fruit trees seriously damaged, some beyond recovery. The Gatineau Valley may be mentioned as one illustration of the extent of the trouble from caterpillars. A special in the *Journal* a few days back says dwellers in the Gatineau district "have some little idea now, in the caterpillar visitation, of the horrors of the plagues that befell the Egyptians of old." Foliage is smitten; giant trees are near death. Even the railway is attacked. It took two C. P. R. engines the previous day to drag four coaches to Chelsea across "the horrid mass that clogged the wheels." The train which left Ottawa at 5:30 in the afternoon was stalled at Ironsides (about six miles from Ottawa). The locomotive could not proceed further, although it had only two coaches to pull. The train that had left Ottawa at 4:40 came backing down the incline to Ironsides and pulled up in front of the 5:30, being unable to proceed. It had four coaches. The engine of the work train at Chelsea (near by) was then requisitioned, "but the two engines failed to negotiate the four coaches of the 4:40." So two coaches only were taken to Chelsea. They reached Chelsea at 6:42, having taken two hours and

two minutes to make nine miles. At West Aylwin and Ironsides the plague is at its worst.

The situation has been so menacing in the province of Quebec generally that Archbishop Bouches early in the month sent out urgent instructions to all the Roman Catholic priests in the province requiring them to call on their parishioners to search for and destroy caterpillars' nests wherever found. Mr. J. M. Foster, of Montreal, a prominent French-Canadian citizen, recently made a tour through the province, and on his return informed the press that the caterpillars were destroying the orchards and crops and appeared to be increasing at a rate that he could only characterize as alarming. The fruit trees were covered with caterpillars' nests, and unless these were at once destroyed it would be too late, he asserted, to prevent enormous losses in nearly all the fruit-growing districts.

All this came close on the heels of the cheering statement wired from Vancouver that Mr. T. Wilson, Dominion fruit inspector, had stated on his return to that city from up country that everything looked like bumper crops in the Kootenay and Okanagan fruit regions; although, on the other hand, in the Fraser Valley the bug moth had caused considerable damage, and in some sections as much as 50 per cent. of the apple, cherry and kindred crops had been destroyed.

Writing on the prospects of the English apple crop, in his last monthly report, Canada's Fruit Commissioner at Leeds sent the following to the Trade and Commerce Department here: "Information received up to the time of writing would indicate that orchards in England are presenting a finer spectacle of blossom than has been seen for many years. From the appearance of the trees, there is every prospect of a heavy yield of apples providing there is an absence of morning frosts during the next three weeks, which is the critical time of the year for growers." A cable dispatch from London, however, a few days later, was not quite so satisfactory. It brought the information that the hot summer of last year and the dry spring weather prevailing at the time the cable was despatch-

ed had produced a crop of insect pests that threatened to overwhelm the usual fruit and vegetable output of the season. The great hopfields of Kent were menaced with a blight which "only the most persistent spraying" could keep in check, and even the oak trees were suffering from a plague of small green caterpillars which threatened to destroy the foliage. In many cases trees had been completely stripped, and in the ancient natural park at Richmond scarcely a tree was immune. To complicate matters, a plague had attacked the bees in areas spread over greater

had been and were still busy with rabbit-foot and camel-hair brushes, collecting pollen from one flower and painting it into another. In addition, the fruit-growers were faced with an invasion of wasps. The orchardists, therefore, were looking for two specifics: one to save the bee and the other to kill the wasp.

"North Somerset," a recognized English authority on fruit and field crops, live stock, and orchard and farm matters generally, makes the following reference in a contribution to the *Western Daily Press*, Bristol, England, on the subject of fruit prospects,



GENERAL VIEW, VANCOUVER EXHIBITION GROUNDS

part of the Kingdom, and there were grave fears that a lack of pollenization might cause the total failure of the fruit crop. "Unless there are bees," the cable goes on to state, "to carry the pollen from the anthers to the stigmas, there will be blossoms without fruit on." Nearly all of this work is done by "the ordinary honey bee," with the assistance of a relatively small number of insects. A plague known as the "Isle of Wight disease" had wrought such havoc among the bees that the fruit-growers were forced to take over the labor usually performed by the bees, and

under the heading, "Are the Apples Gone?" "There is no mistaking the fact that most of the plums have gone, and a large number of the pears followed suit, especially in low-lying orchards and gardens. A close examination of the apple trees will reveal the fact that an undue proportion of these has followed suit. Of course, there is the old adage about the apple running away with midsummer and returning with St. Swithin's, but I am afraid it has run away a bit too early. If you look at some trees you will see the dead blossom still holding on. Some think that these brown

leaves are due to the frost, which caused the disappearance of other portions of the crop. But if you pull off one of these incurved brown petals, it does not need a magnifying glass to reveal that very lively grub, the apple blossom weevil. The petals protect it from the birds, whilst it eats the life out of the apple until the time comes for the larvae to turn into beetles to renew the process all over again, in the destruction of another year's crop. If this year's crop of fruit is a very considerable failure, it must certainly make a considerable difference in the price of cider."

This chiefly refers, of course, to the country around the western metropolis; there are other sections of Great Britain to which North Somerset's remarks do not altogether apply, and where the conditions are much

land, next year, a section will probably be devoted to fruit exhibits from all the British Overseas Dominions. The belief seems to prevail that the Overseas section might be made very attractive. It is to be hoped, if the intention is carried out, as there is every prospect of its being, that Canada will be well and thoroughly well represented. See how these things lead to new openings and spread. On the question of this Overseas Dominions section of the Royal Agricultural Society's show at Bristol being first publicly mooted, the directors of the Museum and the chairman of the Museum committee at Bristol wrote to the Lord Mayor of the city recommending that an effort be made to secure for the Museum after the close of the exhibition some of the Overseas Dominions' exhibits. The letter pointed to Bristol's com-



FRUIT BUILDING, VANCOUVER EXHIBITION

better. In some districts, fruit looked well up to the opening days of the present month, and occasionally reports were received of sections where fruit prospects were never more promising; but, taking the reports as a whole, it is found that to those from fully two-thirds of the British Isles, North Somerset's remarks apply as much as to the western and southwestern parts of England.

I mentioned in my last letter that prizes were offered at British fruit shows for apples packed in such commercial packages as barrels and boxes, properly graded and packed, and that during the past apple season in England apples from Kent, well graded and packed neatly in boxes, were on the same market in Liverpool quickly cleared at high prices when competing against Canadian and United States apples packed in barrels. This reference to fruit show prizes in the Mother Country reminds me that at the British Royal Agricultural Society's show in Bristol, Eng-

land, next year, a section will probably be devoted to fruit exhibits from all the British Overseas Dominions, and referred to the forward movement on the part of Bristol in the matter of dock accommodation, railway expansion, and facilities for dealing with colonial products, and also the fact that Bristol had become one of the great ports for emigration. It was suggested that the present was an opportune time for bringing together collections, illustrative of Dominion and Colonial exports, and that a useful purpose would be served if a series of such exhibits could be retained for the Museum. The communication was read at a meeting of the Publicity Committee, and the Lord Mayor was asked to communicate with Sir Gilbert Greenall of the Royal Society on the subject. For this information I am indebted to the Western Daily Press of Bristol, one of the most influential of the provincial dailies published in the United Kingdom.

A recent bulletin of the Ontario Department of Agriculture indicates some of the effects on fruit crop prospects in this province for the present year of the meteorological and other conditions that prevailed last winter. It shows that the severity of last winter told upon some orchards in a very marked manner, while many others were practically unscathed. Complaints are made of injury to various classes of fruit trees from the San Jose scale, more especially in the Lake Erie counties, and of the caterpillar threatening apples in some of the Lake Ontario counties east of Toronto; but "it is encouraging to note that spraying operations were reported as likely to be more active than ever this season." Raspberries, blackberries, and other bush fruits, which were considerably broken down or

snow excessive nor in drifts that worked any harm. The months of January and February was a liberal snow-covering from December. In nearly the whole of Eastern Canada there to be noted in the early part of the winter, were particularly cold. In the fruit districts of Eastern Canada the mercury frequently ranged from 15 to 30 degrees below zero for several days at a time, and not for one period alone, but during several successive cold waves. These months in British Columbia were relatively much milder, and no harm whatever was done to the fruit crop there. Spring was ten days or even two weeks later than usual in the early fruit districts. In the late fruit districts it was probably not more during the first two weeks of May was par-



PAVILION, VANCOUVER EXHIBITION

frozen back as a result of the deep snow and the severe cold, but as a rule were found to have been merely checked and not killed out. Strawberries suffered more from the drouth of last summer than from the cold of the winter. However, taking fruit prospects generally in the province, the outlook was classed as rather encouraging, considering the unusual severity of the past season.

A report of the Fruit Branch of the Dominion Department of Agriculture on somewhat similar lines, says the dry weather of the summer of 1911 had a tendency to ripen the fruit somewhat early, and it was feared that there had not been a good bud development. The early ripening was, however, undoubtedly a good feature, as the buds and wood went into the winter in a thoroughly dormant and matured condition. A severe frost about the middle of November, in British Columbia, was the only adverse feature to the first of March. Nowhere was the

ticularly vigorous under the influence of favorable weather. Then came a cold wave, with anticipations of widespread damage. And now come Ontario reports that pears, plums, strawberries, raspberries, currants and gooseberries promise a good crop, while, however, peaches and grapes are not so likely to be plentiful, the blossoms on these trees having suffered from the early severe weather. Cherries in nearly all the fruit sections of this province appear to be in good condition.

FORLORN FOREBODINGS.

A Dutchman, addressing his dog, said: "You vas only a dog, but I vish I vas you, when you go mit your bed in you shust turn round drie times and lay down; ven I go mit the bed in I have to lock up de blace, and wind up the clock and put the cat out, and ondress myself, and my frou wakes up and scolds; den de baby wakes up and cries, and

I haf to walk him mid de house round, den maybe, ven I gets myself to bed, it is time to get up again. Ven you get up, you shust stretch yourself, dig your neck a leedle and you vas up. I haf to light de fire, put on de kiddie, scrap some mit my vife already and

git myself breakfast. You play around all day and have plenty of fun. I haf to work all day and haf plenty of drubble. Ven you die you vas dead; ven I die I haf to go to h—— yet.' '



MANUFACTURERS' BUILDING, VANCOUVER EXHIBITION

ANXIETY.

I've got a letter, parson, from my son away out West,
An' my ol' heart's as heavy as an anvil in my breast,
To think the boy who's futur' I had once so proudly planned
Should wander from the path o' right an' come to such an end!
I told him when he left us, only three short years ago,
He'd find himself a plowin' a mighty crooked row—
He'd miss his father's counsels, and his mother's prayers, too;
But he said the farm was hateful, an' he guessed he'd have to go.

I know thar's big temptation for a youngster in the West,
But I believed our John had the courage to resist;
An' when he left I warned him o' the ever-waitin' snares
That lie like hidden sarpiants in life's pathway everywhere.
Our Jack, he promised faithful to be keerful an' allowed
He'd build a reputation that'd make us mighty proud;
But it seems as how my counsel sort o' faded from his mind,
An' now the boy's in trouble of the very wustest kind!

His letters come so seldom that I somehow sort o' knowed
That Jack was a trampin' on a mighty rocky road;
But I never once imagined he would bow my head in shame,
An' in the dust would waller his ol' daddy's honored name.
He writes from west the Rockies an' the story's mighty short;
I just can't tell his mother; it'd crush her poor ol' heart!
An' so I reckoned, parson, you might break the news to her—
Jack's in the Legislatur', but he doesn't say what fur.

JUDGE AND JURY.

In a southern county of Missouri years ago, when the form of questioning was slightly different from now, much trouble was experienced in getting a jury in a murder trial.

Finally an old fellow answered every question satisfactorily; he had no prejudice, was not opposed to capital punishment, and was generally considered a valuable find. Then the prosecutor said solemnly:

"Juror, look upon the prisoner; prisoner, look upon the juror."

The old man adjusted his spectacles and peered at the prisoner for a full half minute. Then, turning to the court, he said:

"Judge, durned if I don't believe he's guilty."

The Little Apricot Cutter

AN AUSTRALIAN ROMANCE

By Mrs. M. Ella Chaffey

CHAPTER XVIII

THE BARON.

It was one o'clock when the Baron entered Amanda's neat dwelling. Only an hour since Valtin had set out on that walk which had had such an unexpected ending. The first drops of the storm that was threatening then, were now falling, and thunder muttered and rumbled in the distance.

Mademoiselle was still up. She was in the midst of her packing and the room was littered with a various assortment of pretty drapery and ornamental trifles.

She was holding a small gilt clock in her hands, and it struck one, in clear, bell-like tones, when the Baron came in. He was astonished when he heard it, for he had imagined it to be much later.

"Enter, mon ami,—but enter! Already it begins to rain. I am glad that you have come!"

She put down the clock and ran to him. Her eyes were luminous with the tender passion the Baron's presence never failed to evoke, and her face was pale, for she had had a long and tiring day; she was very beautiful.

"You will be ready, ma mie?" was all he said.

"Ready to leave this desert? Je le crois bien. If it were in the middle of the night I should be ready, and well content."

He gazed at her for a moment or two, without speaking, as if an idea had struck him.

"I do not know," he said at last. "Perhaps it might be better."

"How droll you are, 'Natole, mon cher. What is it then?"

He did not reply, but sat himself down in an easy chair by the fireside and looked gloomily into the empty grate. Then he gave a slight shiver.

"You are cold, 'Natole," cried Mademoiselle, quick to notice. "We will have a fire. The day was warm, but the night is cold. It was stupid of me not to think!"

She bustled out to call Marie, who was dozing in the kitchen and who came in, grumbling sleepily, to start a fire as she was bid.

"What 'imbeciles' are these?" she muttered to herself. "It is not cold. And if it were, why not go to bed like other Christians?"

But they paid no heed to her grumbling. Only when the business was done and a little flame shot up Amanda said:

"'Bonne nuit,' Marie. You may go now. I will make the chocolate for Monsieur le Baron if he desires it."

The crackling, gleaming flames seemed to cheer the Baron; he spread his hands to the fire and the warmth comforted him. It was not cold, yet he was shivering.

Amanda looked at him out of the corner of her eye. She half feared he was ill, but her native wit made her understand that he wanted to be let alone, so she took no further notice of him but went on with her packing; and to check her inveterate disposition to talk, she sang all her little songs under her breath while she moved about the room.

Outside the rain fell in heavy torrents.

At last all was done that could be done that night. She took a cushion, and, throwing it on the hearthrug, she sat down and leaned her head against the Baron's knee.

He moved a little impatiently, but did not speak.

"What did you mean, 'Natole,'" she asked, for his last words were still puzzling her, "when you said 'it might be better'?"

"It might be better for us to leave tomorrow night, instead of by the coach," he replied shortly.

She was greatly surprised and kept back with difficulty the questions that crowded to her lips. Tonight she did not dare run the risk of angering her friend, for though she adored him, she did not trust him, and deep down in her heart she believed him capable of going away and leaving her alone in this barren wilderness, to live or die as might befall.

Fifty times that day, in spite of the tempestuous joy that had filled her heart at the vision of Paradise which he had opened to her, a doubt had arisen to afflict her. "Will he be true? He has promised; but he has forsaken others—why not me?"

So when he spoke indifferently of leaving in the middle of the night, as if it had been a mere matter of choice, she only answered carelessly:

"When you will, mon ami. I shall be ready as I said. Only to leave this 'enfer,' no matter when or how we go, will be enough joy."

"We shall see," responded her friend. "Fairfax is dead," he continued, forcing himself to talk.

"Ah, then you said true."

"His share in the mine belongs to me now."

"What! Then it is all ours, 'Natole. All ours!'"

"Yes, all ours. And tomorrow it will be sold, and the money will be all ours, to go where we like and spend how we will."

"How much, 'Natole?" she asked eagerly, while her eyes danced and her cheeks glowed with excitement.

He named a considerable sum. It was an immense fortune to her. "Ah, Dieu de Dieu! Quelle joie! quel bonheur! We will have a chateau, 'Natole, and a title, of course, and a Hotel in Paris!"

Her delight was infectious, and for a little while he was able to forget that corpse lying in the thicket by the bend in the road and to listen to her chatter and answer her thousand questions, while she regaled him with chocolate made on a small silver spirit lamp.

"What a chance that I did not pack it," she exclaimed happily, "for I did not expect you tonight."

Then she sat at his feet again while he drank the sweet concoction, and she nibbled little biscuits and playfully pressed him to have some too. But once more he grew absent, and 'distracted,' and soon there was silence again in the little room.

The fire burned low and suddenly the Baron began to shiver again. He had a desire to be out-of-doors, in the air. The storm had by this time spent itself, so he bade Amanda a brief and cold good-night and went out into the darkness.

It lacked but an hour or two till dawn. He wandered restlessly up and down the road, sometimes in the direction of the Camp, thinking he would seek his tent and try to sleep the remainder of the night, but always, so soon as he got there, repelled again, unwilling to be still, unable to rest. Then he would wander back, as far as the lonely grove which had an irresistible attraction for him.

He had before leaving the spot, dragged Andy Mann's body away from the road, into the shadow of the little wood, having first assured himself that he was dead. And now, whenever he came near, although he could not distinguish the sailor's form among the dark shadows of the trees, he could always catch a gleam of white, which told him that the cockatoo was still mounted on guard beside his dead master.

He had not meant to kill him, was the ever-recurring protest in his brain. He had only felt furious at man and bird together, and when he had aimed that fatal blow, he had thought it small matter where it might descend. But that was only the thought of passion. He could not be held accountable for that. He sat down on a log by the road, and near the group of trees, to wait for the light, and to think.

If the body should be discovered that day, would suspicion light on him? After all, looking at the matter calmly and reasonably, why should it? Though he had been away from the camp all night that was not such an infrequent occurrence as to call forth suspicion. He was not intimate with the sailor, although their camps adjoined. Also he had no business dealings with him; only Von Bergen,—Ah, of course! Why had he not thought of that before? What more natural than for suspicion to fall on the dead man's partner, whose disappearance on the night of the murder would be strong corroborative evidence that he had had a hand in the deed? To be sure there would be the absence of the Territet brothers to account for as well, but he thought that could easily be explained to every one's satisfaction. He must see Amanda as soon as possible and tell her what to say in the matter.

These thoughts gave him infinite relief.

For an hour or more he sat on the same spot, thinking deeply—arranging his plans. After all, the important part was to conclude the business of the sale of the mine as quickly as possible. It was to be a cash transaction. He had stipulated for this, saying frankly that he wished to return to his native land as soon as ever the matter was settled, and agreeing to a considerable reduction on the original sum asked, on condition that the whole amount should be paid over at the time of the sale. As soon as the money was in his hands he felt that he would be safe. He would take Amanda with him, of course, but the brothers and Marie Simple must remain be-

hind. It was not well to travel with too large a party.

Undoubtedly it would be better if the body were not discovered that day. He felt uncertain of himself, for one thing; he was not sure if he could preserve the aspect of unconcerned indifference which he thought would be proper for him to wear, should he be suddenly confronted with Andy Mann's corpse.

A rosy tint of dawn was at last to be seen in the sky; and with the rapidity of that Southern latitude, morning approached. He rose and stretched himself. He would go into the thicket and look. It would be well to accustom himself to that sight, so as not to be taken unawares.

Never before had he killed a man, except once in a duel. That was different, certainly, and it was long ago, when he was little more than a boy. Still he had never forgotten the feeling of horror that overshadowed him when he realized that his opponent was actually dead—and the passionate desire to undo the deed that could never be undone.

He entered the thicket and peered through the small, straight tree trunks. There lay the form of Andy Mann, quite still, as if asleep. The great shock of red hair was wet and matted by the night's rain. It lay in rank strands over his forehead, giving him an unnatural look. The cockatoo was flapping his wings, to greet the coming day. At sight of the Baron he began to shriek and scream.

"Thief and murderer!" cried Daff. He had evidently not forgotten the exciting scene of the night.

The Frenchman glanced uneasily over his shoulder. If any one had heard, would it lead them to suspect?

He stepped nearer. The bird must be killed. It was inevitable. His noise and screaming alone would lead any passed-by into the wood, to discover the dead body. With these thoughts running in his head, he came closer still, meaning to seize Daffodil and wring his neck. It could be done in a trice, he thought.

"Pretty Cockie!" cried the Baron, and felt in his pocket for a morsel of biscuit which he vaguely remembered Amanda had slipped in it, while he drank his cup of chocolate the night before.

"Pretty Cockie!"—and he held the biscuit towards him.

But Daffodil was a knowing bird, as his late master had said many a time; he was not to be easily caught. He permitted the Baron to come quite near, but when he leaned for-

ward and was about to lay hold of him, Daff ignored the biscuit and dug his powerful beak viciously into the nearest out-stretched finger. Then, with a derisive scream he flapped his great white wings and flew into the tree overhead.

There he stayed, walking backwards and forwards on a long branch, looking down mockingly at the Baron, who continued to tempt him with the piece of biscuit until his patience was exhausted. Daffodil was hungry, but he was very wary.

Finding that coaxing was useless, harsher measures were resorted to. He took up bits of stick and hard earth,—a stone when he could find one, but there were not many—and threw them at his feathered enemy. This treatment roused the cockatoo to a fury. "Thief and murderer!" he shrieked, as he flew from branch to branch, higher and higher, until he hung, swinging on the very top of the tree, where he chattered loudly and began to sing "Tara-ra-boom-deay," breaking off at every word to hurl another "Thief and murderer!" at the unfortunate man below, who continued to throw at him whatever missile came to hand. But although he hit the bird once or twice, he did not succeed in doing him any injury.

It was broad daylight now and the Baron felt that he dared not stay any longer in the vicinity of the grove.

"Curse the bird!" he muttered. "I believe he is the very Devil incarnate."

As he walked along the road he could still hear those discordant cries, and looking back he could perceive a patch of white swaying backwards and forwards in the top of the highest tree.

Once more he presented himself at Mademoiselle's residence. Breakfast was prepared for him and he washed away the signs of his sleepless night, and brushed off the mud of the rain-soaked roads. In fact he made his toilet with great care, for on no account did he wish his appearance to suggest an uneasy mind or a night of watching.

Gloomy and morose, he paid no heed to Amanda's cheerful attempts at conversation, while he sat eating his breakfast. But when he had finished, he looked at her suddenly, and said:

"You remember what I told you two days ago about Raoul and Auguste, 'Manda?'"

"But no! What then?"

"Of course you remember," impatiently. "Did I not tell you that they were to start last night with the horse and cart for the Port?"

A French steamer will be in and she will have on board some merchandise for us which they are to get."

"You dream, 'mon cher'; you told me nothing of this."

He looked at her angrily.

"If I dream, it is because I wish you to dream too—you do understand?" he said roughly.

Amanda looked down. It was not the first time that she had been expected to do as she was bid and ask no questions.

"Oui, 'Natole,'" she answered meekly.

"It is well. You will remember I told you about this day before yesterday, if anyone should ask you questions. Now I go to the Notary, and we will return within one hour or two, I expect, with the Englishman, to sign the papers."

He left her brusquely, without another word.

"Why then this bad humour?" Amanda asked herself, resentfully. "And why this tale of Raoul and Auguste fetching merchandise from the port? What need have we then of merchandise? Are we not about to leave for Paris? But no one must know of that either. Everything is mystery. Mystery! I only hope it may end well!"

While she was indulging in these reflections the Baron walked boldly towards the township. All was quiet among the trees as he passed, and a hope thrilled his heart that the cockatoo might have betaken himself elsewhere.

Arrived at his destination, he found the one street of the village in a state of mild excitement, for the coach had arrived an hour before and groups of men stood in front of the houses and shops, discussing the latest news before they settled down to the day's work.

The lawyer who had drawn up the papers in connection with the sale of the *Fleur de Lys*, was an energetic young business man of many interests. Among other things he was agent for the Coach Line, and it was at his office that the great lumbering vehicle drew up, to discharge its load of passengers, packages and mailbags—the Post Office being under the same roof.

The Baron was therefore not surprised to meet a stranger coming out of the office door as he was about to enter it. Still, a lady was an uncommon sight at Possum Tail Ridge, and he looked twice at the slight, girlish face and figure, for nothing escaped those keen

eyes of his, even in his most pre-occupied moments.

"A pretty girl," was his half-formed thought. "But what does she here?"

Then he stepped quickly inside the lawyer's office, for he was consumed with impatience to have the business that had brought him there, concluded.

CHAPTER XIX

AT THE LAWYERS OFFICE AND IN THE SCRUB.

Mr. John Smiley was, as has been said before, a very busy young man. He was agent for several Insurance Companies; he was the representative of most of the large business houses in the Colonies who traded in this remote spot, and besides this he did a good deal in mining shares, on his own account and for others. People said he was growing rich; he had a breezy, prosperous air about him that suggested the idea. However that may have been he did not cease to work as hard as ever, both in season and out of season. At any time he might be seen at his desk, pouring over lines of figures or writing busily—when he was not flying about from place to place, giving to this man and that five minutes or less of his precious time—attending to half a dozen matters of important business within as many minutes.

Such being John Smiley's character, it was not surprising that on mail morning he should not find time to give more than a brief nod of recognition to the Baron when he entered the office. That formality over, he returned to the pile of papers he was reading methodically, laying this one on his desk, putting another in a pigeon-hole, and throwing a third into the waste-paper basket.

"Ready to close up that business this morning?" he enquired casually, when he was about half way down the pile.

"Yes," answered the Baron, briefly. He was standing by the window with his hands in his pockets, watching the lawyer's quick movements with scornful impatience. He affected an overbearing demeanor always in dealing with Mr. John Smiley. This he perhaps considered in keeping with his supposed title and aristocratic connections, but he rarely put on any airs of the kind at the Camp, among his mining comrades; as Old Harry had said to Valtin, he was a democrat there.

Presently the Englishman sauntered in, and then the lawyer instantly put aside his letters and swinging around in his chair, was ready

to give his undivided attention to the business before him.

"Be seated, gentlemen," he said, waving his visitors to a couple of chairs on the opposite side of the room.

The Baron preferred to remain on his feet, however. He brought out the paper he had so triumphantly exhibited to Valtin the night before, and explained to the lawyer and the agent that he was now fully prepared to conclude the sale.

"I settled with my partner before his death," he said. "I had advanced him large sums of money and made over some property to him before. It was his particular wish to settle the matter in this way, for he owed me more than the amount of his share."

The Englishman, who had expected some further delay was clearly relieved when he had examined the paper, and expressed himself ready to carry out his part of the contract immediately.

John Smiley, however, had something further to say on the subject.

"The document has not been registered yet, Mr. Fortier."

He always called the Baron "Mr. Fortier," for so his name stood on the books in the Warden's Office, "Anatole Fortier."

"It was only signed yesterday, but the regulations shall be complied with immediately. I will hand the paper over to you now for that purpose, if you like," and the Baron offered him the document, which he took and after reading it over once more carefully, put it away in a small safe.

"Your partner died in the night, I understand?"

"Yes, and so far as any one knows, he has no relations. Therefore you can see that no further objections can possibly come from that quarter."

"Certainly not," put in Mr. Brown, the Englishman.

"Nevertheless," the lawyer said with great deliberation and decision, "I feel bound to advise my client here to wait a little longer before concluding the sale. I will tell you why," he added hastily, as the Englishman began an energetic protest. "This morning a young lady arrived by the coach. I had the honor of a short conversation with her. It appears that she is the step-daughter of Mr. Fortier's late partner, Arthur Fourfields, better known on the Ridge as Harry Fairfax. His wife would have been here before his death had she not been detained by illness;

therefore the daughter as soon as she could leave her mother, came in her place."

"You told us your partner was without kith or kin!" Mr. Brown exclaimed, turning a sudden, distrustful look on the Frenchman.

"So I thought," said the Baron. "This is news to me as well as to you." And so it was—and very unwelcome news, too. He knew now who the young lady whom he had met at the door was.

"She asked me to direct her to the Fleur de Lys Camp," continued John Smiley, "and in the course of conversation, I had to tell her of her father's death and any one would have felt sorry for the girl; she showed me part of the last letter which the dead man wrote to her mother. In it he speaks of transferring his share in the mine to a young man named Von Bergen. You know the young fellow, of course—so do I. This may have been a sick man's fancy; very likely it was, and never came to anything. Still, under the circumstances I should advise my client, Mr. Brown, not to close this business too hastily. To wait a day or two longer will do no harm. In the meantime Mr. Fortier's deed can be duly registered and if Von Bergen or any one else has a claim on the property it will be brought forward and dealt with on its merits."

The Baron's face during the lawyer's speech showed mingled fear and fury. He felt that the lawyer suspected him of fraud; he was secretly convinced that if the sale of the mine was not concluded there and then it would never be made at all, and yet he dared not show any unwillingness to submit to the proposed delay.

His only hope was the Englishman.

"I will of course, do whatever Mr. Brown wishes in the matter," he said, when Smiley had finished speaking. "Personally I am convinced that there is not the smallest need for any delay, but I am perfectly willing to wait any reasonable length of time." His face was white and drawn and even his utmost effort at self-control could not make his voice sound natural. He himself was at a loss to understand why he should be so unnerved.

"Oh, I always take my lawyer's advice," the Englishman said, turning the subject off with a laugh; but his slow suspicion was aroused too, and he began to doubt the Baron, whom hitherto he had liked. "You have kept me waiting a good many weeks, Baron, so after all it is no more than fair that you should wait a few more days yourself now."

"My partner, not I, kept you waiting, Mr. Brown," the Baron returned, stiffly. "I, on

the contrary, was anxious to conclude the business with as little delay as possible, because, as I think I mentioned to you before, my affairs in France have for some months urgently required my presence there. But it shall be as you wish, Mr. Smiley," he added, turning to the lawyer. "I will request you again to see that the usual regulations are complied with in respect to the deed you hold. Good morning, gentlemen. 'Au plaisir de vous revoir.'

He bowed gracefully. It was not often the Baron reverted to French, preferring his own remarkably good English, but this morning he was not himself; he was acting a part with but indifferent success, and his native tongue came unbidden to his lips.

At the door of the office he paused and stood a moment, lost in thought. Then he spoke again.

"It is possible," he said, "that I may have to leave by the coach tomorrow to be absent for a few weeks. It is possible merely, though hardly probable. In the event of my going, I will send papers to Miss Amanda Territet, to enable her to conclude the sale of the mine to Mr. Brown, as soon as that gentleman assures himself that I am not claiming for myself more than I am entitled to."

Once more he bowed, then closed the door and was gone.

He hurried along the street and turned into the road leading over the flat. Rage and disappointment filled his heart. To have been so near the consummation of his hopes and then to have them dashed to the ground in so unforeseen, so unexpected a manner! For to him, in his morbid, excited state, this delay meant the ruin of all his plans.

Why, he asked himself, in futile despair, had he not been satisfied with the share of the mine to which he was justly entitled? Would it not have been enough? Why must he needs cast covetous eyes on the share of his sick partner? Ever since the first thought of getting Arthur Fourfield's portion in addition to his own, had entered his mind, he had not been able to put it away from him. The plan had seemed so simple, so feasible, and once he had begun to look upon himself as sole owner of the rich Fleur de Lys, he could not be satisfied with the thought of less. The dead man had been fond of him, and trusted him; he would willingly at any time have sold his third interest to him for whatever sum the Baron had chosen to tell him it was worth. But the latter was cautious and wily, and

when he saw how near the end was, he had thought it best to wait till then. He had never known that Old Harry had a family and he had certainly not cared to enquire.

And now, this was the result! Like the dog in the fable, he was like to lose the substance in grasping for the shadow.

What good would all his wealth do him if he once got in the clutches of the law?

Was there not punishment for the man who had swindled his partner? And, was not kidnapping a grievous offense in the eyes of the law? And what of that other crime? Who would decide whether it was murder or manslaughter?

His face took on a scared look as he hurried on.

To reach Mademoiselle's house as quickly as possible, was his idea. He would explain the situation as far as need be to her—he would leave all the business in her hands to settle up as soon as possible, and then he would—vanish.

On reaching the bend in the road he was terrified to hear voices in the little grove.

"Already!" he exclaimed, and ground his teeth.

Utterly unnerved and shaken, as well by his sleepless night as by the experiences of the last hour, he felt that he dared not meet any one then, or there. More than all he dared not confront that fiendish bird and hear himself branded in the ears of all as "Thief and Murderer!"

Therefore he plunged into the short, scrubby growth that covered the flat, and walked on, meaning to take a round-about way that would bring him out at the back of Amanda's dwelling. As he hurried along, he still thought and planned.

After the interview with Amanda, he would return to the Camp and force himself to act as if nothing had happened. Harry Fairfax would be buried that day; he would attend the funeral.

At night he would slip away. It was best not to wait till morning. He would walk along the coach road and when the coach caught him up, he would hail it. That would be better than starting from the township, where he would have to speak to many people and give an account of himself and his doings.

Already he felt relieved in his mind and that feeling of terror with which he had been stricken, began to pass away.

The sun was hot. He looked ahead of him for a sight of Amanda's house, which he

thought must be quite close now. But as there was no sign of it, he walked on again, thinking to himself that he must have gone further afield than he intended.

But a strangely and seemingly unlikely thing had happened—and yet an all too frequent occurrence in the scrub. The Baron was lost.

However it had come to pass—whether through the confusion of his thoughts and his mental excitement, which had made him care less of the direction he took; or whether some unlucky chance caused him to mistake one landmark for another, no one, not even the unfortunate man himself, could ever know.

The flat was a vast stretch of wilderness on the edge of which the Ridge and the Big Crab Hole were situated. It was pathless save for the one road he had left so little time before. As he went on and on, he could not but believe each moment would bring him in sight of some familiar object—the neat iron house, the camp, the grove, the road; but he was fated never to see any of these sights again.

All that day he wandered about, trying now this direction, now that; searching, but in vain, for a hillock or a high tree that would give him an outlook over the desert.

When night came, and darkness, he threw himself under a bush, exhausted. Yet he could not sleep at once. Long hours of wandering in the hot November sun, added to the agony of hopelessness and despair that tore his heart, had made him light-headed. All his life passed before him, as he lay looking up into the starry, cloudless sky.

Those early days of graceless youth came first, when he had been expelled from one school after another for mad freaks of wickedness and folly. He had no home memories to turn to; his school life had begun at four years old. Then came the remembrance of the College of the Jesuit Brothers. It had been different there. Those good fathers had treated him kindly and like a fellow-being, not like one of a different species as had been the way of the masters in other schools. He thought gratefully of that kindness now.

How well he remembered the beginning of his career there. A wild outbreak had taken place among the scholars. At a signal during evening study the gas was turned off all over the house, and while everything was plunged in sudden darkness, the boys broke into the wine-cellar and drank recklessly and deep of whatever they found there. When at

last order was restored, Anatole Fortier was pointed out to the Brothers as the instigator of this riot and the boys' ringleader. The good Father Superior had not spoken to him before the whole school as was expected, but had summoned him to the little private study, whose simple interior was rarely revealed to a mere scholar.

There he stood, proud and sullen, beneath the Father's searching eyes.

"Fortier, listen to me," he could hear the priest's smooth accents now. "You are born to be a leader of men. Not another boy in this school has your vigour of intellect or your force of character. What then, my boy? I say, you will always be on the front. The question is, will you lead others to good or evil? Hitherto you have chosen the ignoble part of being a leader in sin. Now I ask you, I entreat you, to take your rightful place at the head of this school in all that is good and noble!"

How proudly he had stepped out of that little study, after kneeling to receive the Father's blessing. The scholars had gazed at him in breathless surprise as he walked boldly into the great Refectory. Where was the downcast look, the penitent demeanor, the air of having been whipped, they were all looking for?

Ah, they knew how to treat one, those Jesuit Brothers? There was tact! There was penetration and good heart! He was a changed boy during the two years he spent at their College: always at the head of his classes, always an example of good behaviour, called up to be presented to visitors, pointed to as a model scholar. It was there he learned those arts of graceful conversation and manner which had been his chief attraction in after years.

At the University, to be sure, everything was changed again. There was no good Father to check the evil and call forth the good by judicious advice and praise. The "sauvage" in him, never tamed, only subdued, broke out again. He had been a wild and wicked youth.

Then followed many other scenes in all parts of the world, among the rich and noble, among the poor and degraded, for he had led an adventurous life. All passed before him like so many pictures; he saw himself now in this situation, now in that; but always as if looking upon the actions of another and indifferent person.

Never until now had Fortune been within his grasp. And now—behold the end! The

greed of power had from the beginning been his bane—perchance after all the Jesuit Father had not done well to appeal to it: for truly the greed of gold, which had brought him to this pass, was but another name for the same old evil.

At last he slept a few short hours and awoke to find the hot sun pouring down upon him.

Another day, and another night—and yet another day. Then he laid him down for good and all, too weary and exhausted to ever to rise again.

It was a strange fate that led him at the last to die within a stone's throw of the road for which he had searched so long and hopelessly. There they found his body a fortnight later, and they knew at a glance how he must have perished, for the soles of his shoes were worn as thin as paper.

Written in pencil on the back of a letter were a few lines dated the day after he disappeared. The words were French—the name at the top of the page was Mlle. Amanda Territet.

There was no student of foreign languages at Possum Tail Ridge, and not one of the searchers who found the body could have deciphered a word of the few closely written sentences. The sheet of paper was immediately placed in the young Frenchwoman's hands and there was an end of it. Much curiosity was felt, however, concerning the import of this message from the dead, but nothing further was heard about it at the time.

(To be Continued.)

HE STUTTERED TOO.

Three strangers were in the Pullman smoker, when one of them turned to another and asked:

"H-How f-f-f-far is it t-t-to P-P-P-Pittsburgh?"

The man addressed made no reply, but got up and left the car. The stutterer then turned to the third man, who gave him the information.

A few minutes afterward the third man met the one who had left the car, and said:

"See here! Why did you go out without answering, when that man asked you a civil question?"

"D-D-Do you think I w-w-wanted to g-g-g-g-et m-my head knocked off?" was the answer.

GROWING WINTER CAULIFLOWER

From Professor A. G. B. Bouquet of the vegetable gardening department of the Oregon Agricultural College we learn that the months of September and October usually see the finish of the market gardeners' marketing season in the eastern part of the United States and Canada, but the climatic conditions of Oregon, Washington and British Columbia give a much larger growing season and also make it possible to market a considerable amount of produce during the mild winter and early spring. Cauliflower is imported into the Pacific Coast cities in very large quantities, particularly from November until April and May of the following year. Broccoli has been grown for a considerable length of time in Europe, particularly in England and France, and it is grown in some parts of America, particularly in the western portion where the winters are not so severe.

The broccoli seed comes from England and is considered to be selected from the finest strains of broccoli grown in that country. The obtaining of good seed is the first consideration in growing the crop.

Inasmuch as this crop stands on the land during all the winter and part of the following spring it is essential that the soil be well drained and that no water stand on it during the winter. Medium heavy clay loam, well fertilized with suitable manure, is good for this crop, or any well drained land that is not too sandy or too heavy should be suitable for growing broccoli. Where the plants stand in water during the winter time, however, there is a great tendency for them to rot and die.

The seed for this crop is commonly sown either during April or May. It is customary to sow very thinly, broadcast or in rows about three inches apart on well prepared land outdoors. The seed bed should be carefully spaded and finely raked, and should be located so that the plants can be watered at various intervals. There will be but one transplanting directly to the field, and consequently it will be necessary to have the plants stand about two and a half inches apart from each other in the seed bed, so the sowing will have to be carefully done. The seed may be covered a quarter of an inch and during dry weather the bed must be kept moist. Transplanting to the field will usually take place about six or seven weeks after seed

sowing, and is usually done during weather that is dull or showery. Where this is not possible it will be necessary to handle the plants very carefully so as to lose none of them during transplanting.

The plants should be about six inches high before they are removed and the bed should be well watered down several hours before lifting. The field should have been previously stirred so as to have as much moisture at the surface as possible and fertilization should have been previously made in the spring by means of well rotted manure. The common distance for setting these plants is thirty to thirty-six inches between the rows, and twenty to twenty-four inches between the plants in the rows. In dry weather it will be necessary to water the plants at setting time and then for a few days until they get well established. It is far better to see the plants in the afternoon than at any other time in the day. Cultivation should be kept up assiduously so that the plants may get all the moisture available. Where irrigation is possible it should by all means be practiced. The plants can not grow too fast during the dry, warm days but they will not make their best growth until the warm rains in the fall.

Most varieties of broccoli begin to head some time in January, February, or March, which months are often severe in temperature, but the plants under these circumstances will be able to stand any ordinary winter that western conditions can produce.

The blanching of a head is a most important thing. When the head first forms and is about the size of a baseball the larger outside leaves of the plants should be tied together over the head to protect it from rain and general weather conditions, or the larger leaves may be broken over the head for the same purpose. About twenty or twenty-five days after the bleaching has begun, depending on the weather, the heads will be ready to cut. They should be solid and have a fine, homogeneous white mass rather than a loose, 'ricey' appearance, which indicates that the head has been too long in the field before marketing. When the heads are cut the outside leaves should be left on but trimmed down to a point so that the top leaf stock is in the same line with the top of the cauliflower head, or if it is to be shipped quite a distance it would be wise to let the trim be slightly longer or to leave some of the outside leaves on altogether as a protection in the crate. The field must be carefully looked over every few days after bleaching commen-

ces so that every head will be marketed in its proper condition.

Some of the best known varieties put out by the English firm of Sutton & Sons are the Autumn Protecting Snow White, Satisfaction, Winter Mammoth, Superb Early White and Late Queen.

Those who wish to engage in the growing of Winter Cauliflower should take steps now to obtain their seed for planting next winter. They should also preserve this copy of *The Fruit Magazine, Scientific Farmer and Canadian Citizen* for future reference on the subject.

OBSTACLES.

They come like phantoms in the night,

In substance not as real,

They move before us on our path,

Their shadows oft we feel,

A gentle push will soon dissolve,

And scatter all their gloom,

In essence they are thin as air;

So why then heed their doom?

They come that we may prove our strength,

Our fears of what is not;

For trials don't exist at all,

They're but a tangled knot.

Our patience must unwind the skein

And learn the true way out;

A mind that's keen in greater things

Will not spend time in doubt.

They sometimes grow within our minds,

Like seaweed underneath.

The water green, a shimmering sheen,

And form a mottled wreath;

They never meant to do us harm;

They could not if they tried,

They simply lie within our minds

Like gathered seaweed dried.

HELEN B. YOUNG.

THRIFTY.

A lady who had kindly consented to care for a neighbor's child for the day endeavored to keep her contented, and among other things gave her a candy dog, with which she played happily all day.

At night the dog had disappeared, and the woman inquired whether it had been lost.

"No, it ain't lost," answered the little girl. "I kept it 'most all day, but it got so dirty that I was ashamed to look at it; so I et it."

Poultry Raising as a Diversification of Farming

BY PROF. A. W. FOLEY

Superintendent of Poultry, Department of Agriculture, Edmonton, Alta.

From the time our forefathers landed on the Atlantic shores and their little colonies desired to expand either because of the ever-increasing population, or the tendency of the movement has been westward, across mountain ranges, prairies, rivers and forests until the Pacific was reached. In this great westward progress of the past fifty years the pioneers have always kept in advance of the general settlement and have located in the most fertile parts and where there appeared to be possibilities of transportation in the near future. These "pathfinders" have passed by certain portions of the great west lying east of the Rocky mountains because they did not consider the rainfall sufficient to produce satisfactory crops.

During the past few years the Province of Alberta, comprising 100,000,000 acres of the most fertile land, has been the mecca of land-hunters from all parts of the globe. The province offers splendid opportunities for grain growing on the prairies, irrigation and dry-farming in the dry-belt and mixed farming in the wooded country to the north.

POULTRY RAISING IS SUCCESSFUL

While different parts of the province may be especially adapted to different farm products, poultry raising may be successfully undertaken in all sections of the country. The opportunities for poultry raising, either as a side issue on the farm, or as a commercial undertaking, are very great. The market demands are much in excess of the supply—to such an extent that hundreds of thousands of dollars worth are imported annually to meet the demands of the ever-increasing population. The farmers have been so engrossed in the great possibilities of grain growing that poultry keeping has been overlooked, and the province as a whole is a consuming rather than a producing people. This applies not only to poultry, but to all lines of food products.

Poultry raising and market gardening make a splendid combination. Not only is the mar-

ket for poultry products unlimited but the prices are in keeping with the demand. Eggs sell at from 20 to 60 cents per dozen, and dressed poultry of good quality from 18 to 30 cents per pound. While the markets offer every inducement to commercial poultry there is also an exceptional demand for high class utility and exhibition stock for breeding purposes and eggs for hatching. The poultrymen of the province supply but a small portion of this demand and carloads of pure-bred poultry are imported from the eastern provinces to help meet these requirements.

CLIMATIC CONDITIONS

Climatic conditions are also very favorable. It is not necessary to build expensive houses. Many poultrymen making a decided success of winter egg production are using cotton front houses, in many cases built of one thickness of lumber. Occasionally the thermometer drops rather low, but with the still, dry air and bright sunlight no unfavorable conditions result. As a matter of fact, during the months of December, January and February, with the exception of a few days early in the year the thermometer has scarcely reached zero, and a large part of the time has been above freezing point. The snowfall is very light and in some parts of the province lies only a few hours after it has fallen. Rain seldom falls until the latter part of May, making the conditions most favorable for the early stages of rearing all kinds of poultry.

On the date this article was written the writer received an unsolicited report from a poultryman at Lacombe, in central Alberta, stating that he had received 3,372 eggs from 290 hens and pullets from January 1 to February 21. Eggs were selling during this time at from 50 to 60 cents per dozen.

GOVERNMENT BREEDING STATION

The Government of Alberta, recognizing the value of the industry to the province, established a breeding station which is under the supervision of the poultry branch of the Department of Agriculture. The popular

utility breeds are kept and the birds and eggs supplied at a nominal price. The breeding station is also used as a demonstration and experiment station.

A great deal of educational work is also undertaken in the way of farmers' institutes where information is given by practical lecturers who are personally engaged in poultry raising in the province. Bulletins are also published on practical poultry matters.

While the government offers assistance to commercial poultry keepers, the fancy and exhibition side of poultry keeping is also encouraged. In the Agricultural Societies Ordinance provision is made for poultry shows, the department paying the actual money paid out in prizes up to \$300. As many of the larger shows have outgrown the grant, further promise is made that where \$500 or more is paid out in prizes, the government pays two-thirds of the actual prize money.

THIS CANADA OF MINE



They sing of lands more beautiful,
 Away across the sea,
 Where the poets of the olden time
 Wooed at the Muse's knee;
 When they sang of gods and maidens,
 In Parnassus' sunny clime,
 But they never knew the beauty
 In this Canada of mine.

They never saw the mountains
 That the clouds of heaven kissed,
 Above the dreamy forests
 In the autumn's purple mist,
 Where the Red man's shortened summer
 Oft is cradled so sublime,
 In the arms of mother Nature,
 Of this Canada of mine.

Where the hills are shadow laden
 And the winds are flecked with gold,
 While they whisper dreams of beauty
 That to us are never old.
 For we hear the lutes of Heaven
 Softly trill about the pine,
 When the autumn leaves are falling
 In this Canada of mine.

Golden red, and yellow laden,
 Rich the autumn's gilden sheen,
 With a tint of heaven's halo,
 When the woods begin to preen,
 And the wild sweet dream is painted
 With the hand we deem Divine,
 For it bears the brand of Heaven,
 In this Canada of mine.

"When the smoky, distant sunset
 Lifts the forest trees ablaze,"
 Over crystal streams a winding,
 Through a sort of leafy maze,
 Then I dream of heaven's purple,
 And the lands beyond the Rhine;
 But the gods have left Parnassus
 For this Canada of mine.

Every shrub we have about us
 Bears a rainbow in its leaves;
 And the envied coat of Joseph
 Seems to hang upon the trees.
 While the rose may bloom in Britain,
 With her ships upon the Tyne,
 We grow the rose of Sharon
 In this Canada of mine.

Wild and wayward is the beauty
 In the land we love so well,
 And it covers hill and valley,
 Every hidden nook and dell.
 Still they tell us of the heather,
 And they sing of Auld Lang Syne,
 But the tree of life is blooming
 In this Canada of mine.

—W. LEONARD.

Orchard Pests and Their Control

BY MR. B. HOY, B.S.A.
Assistant Horticulturist, British Columbia

For purposes of study and of treatment, Orchard Pests may be divided into four great classes:

1. Insect Pests, such as the Aphis, Caterpillars, the Oyster-shell Bark Louse, and the Tent Caterpillar.

2. Fungous Pests, such as Apple Scab, and Peach Leaf Curl.

3. Bacterial diseases, such as Pear Blight.

4. Physiological diseases such as Cherry-tree Gumosis, Fruit Pit, and Water Core.

Before destroying any insect affecting the orchard, three points should be carefully observed.

1. Whether it is actually injurious or beneficial. Many insects, such as the Lady Beetles and the Syrphus Flies, are of great benefit. Watch closely, and determine the form of injury.

2. With injurious insects note the manner in which the food is absorbed, particularly whether from the surface, or whether by suction from below it.

3. Decide on the most vulnerable point in the insect's life history.

For general purposes of control by spraying, insects may be divided into two classes:

First—*Biting Insects*, provided with biting jaws adapted to chewing food. These are usually controlled by covering the plant with a stomach poison, such as Arsenic in a suitable form.

Second—*Sucking Insects*. Are more difficult to control. They are provided with sharp beaks, with which they pierce the surface and draw their food in the form of the plant juices from below it. There is no way of reaching them with a stomach poison, just as a mosquito, which is one of this class, cannot be poisoned by Paris Green. The Aphis and the various Scale Insects are our principal foes in this class. For Sucking Insects we, therefore, use a contact insecticide, that is, one which will kill the insect by touching it, either by filling up the breathing pores, which are situated along the sides of the body, as with Kerosene Emulsion, or by the general caustic action of the spray, as with Lime Sulphur. To get results with

contact insecticides, every insect must be covered. With stomach insecticides, we spray to cover the entire surface liable to injury. With contact insecticides, we spray to cover every insect.

Most insects have four stages in their life history:

First—The egg.

Second, The larval, or worm form, which is the period of growth, and during which most insects do their injury.

Third—The pupal form, usually a resting form, and usually invulnerable in practice.

Fourth—The adult or perfect form.

In the case of the Tent Caterpillar, for instance, the eggs are deposited in the Fall, in a mass, surrounding a young twig, and coated with a water-proof covering. The Winter Spray usually does them little harm. The eggs hatch in the Spring, the larva or caterpillar growing rapidly on the young leaves. This is evidently the time to destroy it with a stomach poison, as it is a Biting Insect. The Codling Moth is another example. The egg is laid on the surface of the leaf or fruit, and is not vulnerable to any practicable spray. As the young larva hatches out, it may feed for a few days on the surface of the leaf, but usually makes its first meal on the surface of the fruit, generally in the calyx end. As we have no means of attacking it unless it has penetrated the fruit, it is evident that some stomach poison must be administered with its first meal. This we secure by an Arsenical Spray, thoroughly applied just after the blossoms fall. We have no means of attacking the pupal form or the adult form, despite many trials. With a knowledge of the principal facts concerning the life history of any pest, we are able to determine possible and practicable methods of control.

1. *The Bud Moth*. A small, brown caterpillar found eating the buds early in the Spring. If plentiful, spray with Arsenate of Lead, 2 pounds to 40 gallons of water, just as the buds begin to open.

The Lesser Apple Worm. A small, pinkish larva, similar in general aspects to

that of the Codling Moth. It eats into the apple in much the same way. Found principally in the Victoria and Armstrong Districts. If serious, spray with Arsenate of Lead, 2 pounds to 40 gallons of water, just after the blossoms fall.

The Codling Moth. Not found in British Columbia. The most serious pest of the apple-grower anywhere. The spray mentioned for Lesser Apple Worm is the most effectual for Codling Moth, and should be followed by another spraying in about ten days.

Tent Caterpillars, Fall Web Worm, Red and Yellow Humped Apple-tree Caterpillars, and other leaf-eating insects, may be destroyed with Arsenate of Lead applied when the insects are first noticed.

Pear and Cherry Slug. A black, slimy larva resembling a tadpole in appearance, but only about half an inch long, found eating the upper surfaces of the leaves of the Pear and Cherry. The first brood is prevalent in June and early July, the second in August. One of the easiest insects to destroy, either with Arsenate of Lead, 1 pound to 40 gallons, or even with ordinary road-dust or slacked lime sprinkled on them.

Scale Insects, the Oyster-shell Bark Louse, the San Jose Scale, and a number of others of the same type, are all easily controlled by the Winter application of Lime Sulphur Solution. The commercial Lime Sulphur, testing to 32 1-2 degrees Baume, should be diluted with nine parts of water. This spraying controls all Scale Insects, and is beneficial in other ways. If applied in the Spring, just as the buds are swelling, it not only aids in destroying the eggs of Aphis and Red Spider, but is important in the control of many plant diseases, such as Peach Leaf Curl, Apple Scab, and some types of Canker.

Aphis. There are numerous kinds of Aphis: On the Apple, the Green Aphis, the Rosy Aphis, and the Woolly Aphis; on the Pear, the Green Aphis; on the Plum and Prune, the Hop Louse and the Mealy Aphis; on the Peach, the Black and Green Aphis; and on the Cherry, the Black Aphis; but the remedies for all of this class are similar.

The Spring application of Lime Sulphur destroys many of the eggs and the winter forms. During the Summer, attacks of Aphis are controlled with a solution of Black Leaf, Black Leaf 40, Whale Oil and Quassia Chips, Kerosene Emulsion, and other contact insecticides. Use at the strengths indicated on the Spray Calendar.

With the root forms of the Woolly Apple Aphis and the Black Peach Aphis, it is necessary to clear the earth from around the base of the tree, and sprinkle with Tobacco Stems. This treatment gives reasonably good results.

Borers. These affect the Apple and the Peach principally. The borers should be dug out with a sharp knife in the Spring. Lime sulphur, especially if considerable extra Lime is added, acts as a deterrent.

Fungous Diseases. While insects belong to the animal kingdom, the various fungi and bacteria are plants. A fungous is a true plant, though usually quite simple in structure. Unlike ferns and flowering plants, fungi have no green coloring matter, and derive all their sustenance in organic form by living as parasites on living organisms, or as saprophytes on dead ones. The Mushroom and Bread-mould are two common types. The whitish threads to be found running through the soil beneath a mushroom or toadstool, is the true plant body, which is equivalent to the roots and stems of higher plants, while the mushroom itself is the fruiting body containing the spores, which are the equivalent of seeds.

From the standpoint of the fruit-grower, fungi may be divided into two classes:

1. Those whose mycelium, or vegetative portion, lives on the surface of the host plant, as, for example, the various mildews.

2. The larger class embraces those whose mycelium penetrates into the tissues of the host plant, such as the Apple Scab and Black Spot Canker.

The fungi belonging to the first group can generally be destroyed by spraying with suitable fungicides when they appear, but those of Group 2 are not affected by such spraying. Their entrance into the tissues is to be prevented by spraying before inoculation takes place. This requires that all the susceptible area be thoroughly coated with the spray, and, if growth is taking place, as in the Spring and early Summer, spraying must be repeated to cover the new growth as long as there is danger of serious inoculation.

The fungous diseases causing most serious loss in this Province, are:

1. Black Spot Canker.
2. The Brown Rot of the Plum, Prune and Cherry.

3. Apple Scab.

Black Spot Canker. This disease causes the death of large areas of the bark and outer wood, principally of the Apple. It is

of consequence only where Fall rains are plentiful, in combination with mild weather. It is easily prevented by one thorough spraying in the Fall with Double-strength Bordeaux Mixture. It is treated fully in Bulletin 34 of the Department of Agriculture.

Brown Rot of the Plum and Cherry. This disease was first introduced into the Province about ten or twelve years ago, and is now a cause of serious loss, especially in the Coast Districts. It is dependent on wet weather, and in dry seasons almost disappears.

Its control is difficult, because of its very rapid growth and prolific spore production. While absolute prevention under favorable conditions is impossible with the knowledge we now have, the following measures give a reasonable immunity:

1. Prune out the trees to admit air and sunlight.
2. Collect and destroy all old fruits on the tree or the ground before Spring ploughing.
3. Spray with Lime Sulphur thoroughly, just before buds open.
4. Spray just after blossoming, and again when the fruit is half grown, with Lime Sulphur diluted 1 to 50.
5. Thin out fruits so that no two touch.
6. Handle carefully, to prevent loss of stems and bruising.
7. Allow fruit to stand over night in a cool place before packing. Pack up only perfect fruit, and keep fruit cool as possible to destination.

Apple Scab. Apple Scab or Black Spot is prevalent in most parts of the Province subject to any considerable rainfall in Spring and early Summer. The varieties of the Famuese family are most subject. The spores of this disease are carried over the winter on the twigs and old leaves. They germinate and spread in the Spring, about the time the blossoms begin to open.

1. Destroy old leaves, by burning or ploughing under.
2. Prune trees to admit sunlight and air.
3. Spray with Lime Sulphur, 1 to 9, before the buds open.
4. Spray just before blossoming with Lime Sulphur, 1 to 25.
5. Spray again, just after the blossoms fall, with Lime Sulphur, 1 to 30.

The second spraying is by far the most important, and must be very thorough if results are to be satisfactory.

Pear Blight. Pear Blight is at present almost unknown in the Province, the repressive measures taken by the Government to control it having given most excellent results. Growers should, however, be continually on the watch for this disease affecting both Pear and Apple trees, and must be prepared to take the strictest measures to prevent its gaining a foothold.

Description. The young shoots and thin leaves wither and turn black, looking very much as though they had been scorched by fire. The infection works down the stem, destroying the life entirely, as far as it goes. Particularly where infection on old bark takes place, there will be found small drops of a sweetish liquid oozing from the bark. This liquid contains myriads of the bacteria causing the disease, and, as it is attractive to bees and other insects, these carry the germs all through the orchard, especially to the blossoms. The nectar in the blossom is a particularly favorable medium for inoculation, and from this follows the form called "Twig Blight," which involves the destruction of the fruit spurs.

Spraying is impossible, because the points of infection cannot be reached by it. The only remedy which has proven effectual is the cutting out of the diseased areas, followed by careful disinfection of the wound and the knife or saw. Cuts should be made from two inches to one foot below the diseased area, depending on the rapidity of progress being made by the Blight.

In connection with the treatment of Insects and Diseases, fruit-growers should secure copies of the Spray Calendar for 1912, and of Circular No. 9, on "Sprays and Spraying," issued by the Horticultural Branch of the Department.

TOUGH.

"Why don't ye buy your meat off me now?" asked an Irish butcher of one of his old customers who had recently taken to dealing at an opposition ship.

"Begorra," replied the old woman, "the last I got from yez I could, without stretching it, 'uv soled my boots with it."

"An' why didn't ye thin?" asked the butcher sarcastically.

"So I wud if I could 'uv gotten tacks to go through't."

And the butcher never said another word on the subject.

Lady Adanac's Fireside Talks

My earliest recollections take me back to Queen's Park, Toronto, where my childhood's home stood among maples and elms, with open stretches of green between. And perhaps the earliest memory of all is that of the first Dominion Day Canada ever celebrated—July 1st, 1867.

My brothers and I were right in the centre of things and our infant patriotism was stimulated by flying flags, brass bands and decorations of red, white and blue; also by gifts of sundry five and ten cent pieces, which were promptly spent on pink ice cream, or sarsaparilla, or went to secure a seat on one of the steeds in the merry-go-round. I remember that I sat on mine with fear and trembling and enjoyed a dizzy ride that left me frightened, yet longing for more.

I was only five, and the patriotic speeches which must have been delivered from the platform by the two great cannons, hold no place in my memory. What lingers there is a still vivid impression of noise and dust, music, firecrackers, festive booths, general jollity and excitement—and over it all the hot July sun streaming down.

Later, the two old cannon by the flagstaff played an important part in my early martial dreams. We children loved to climb all over them when there was no interfering elder to drive us off. At one time I suppose I knew where they came from, but if I did I have long since forgotten. They still typify to me the aggressive spirit of my childish patriotism.

I was a blatant young Canadian for a good many years after that first Dominion Day. Well do I remember bringing down on my head a sharp reprimand from a young man (a good many years my senior, however) when, the first time I crossed the border line between Canada and the States, I exclaimed in clear tones that all could hear: "Here we are in horrid old Yankee Land!"

The reprimand did me good. My views remained the same, but for the first time in my life I realized that the audible expression of our opinions is not always in good taste.

After all, nations go through the same stages as children in growing up. In the beginning there is always the desire to attract attention, to make a noise, to congratulate

ourselves on our achievements and to receive the congratulations of others. There is bustle and activity, and a fine, hopeful spirit that is like sunshine over all. There is also the blustering spirit that assumes a belligerent attitude towards other nations, and in a mistaken zeal to exalt is own, belittles other countries.

We can't expect our nation to differ from others in this respect; yet I think it is time the Dominion of Canada—now forty-five years old—began to "put away childish things" and to seriously consider wherein true patriotism lies.

Oh, women—women of Canada—here is where you can help. It rests with you mothers to train your sons—with you teachers to train your scholars—to a right love of country—a love that is without self-seeking and that is built on the one sure foundation of *feeling*.

The true patriot is the man who feels himself identified with his country, and who so shares the national life that it is part of his own. He not only rejoices in his country's prosperity and glories in her success, but he grieves for her shortcomings and feels shame when she plays a poor part among the nations of the world.

This "honoring of the flag," about which we hear so much, is a pretty piece of child's play only and worth nothing if it does not go along with faith in what that flag should represent and a determination to uphold it.

What does our flag represent, then?

Victory? No!

Glory? No!

Independence? No!

It represents national honor.

Honor is a good old word we don't hear much nowadays. It used to be considered a noble thing to uphold one's honor at the point of the sword, and many a man has preferred death to a dishonored name. "*Autres temps, autres mœurs*"—and we, alas, have almost forgotten what the word means! Let me define it, in the sense of Webster but not his exact words: "An unsullied reputation for honesty, justice and purity." That constitutes honor in the man and in the nation.

If Canadian mothers would try to make their children feel from their earliest days that

they belong to their country and are part of her life, that what they are themselves *matters* to Canada, and that what Canada is, *matters* to them, and will be part of their responsibility when they grow to citizenship, they would be joining hands with the noble women of all ages, who have in actual fact, not just in word, made the men who made the nations.

When men are as sensitive to the national credit or discredit as they are to their own, then we shall have governments that are at least as good as the people they govern.

"I think too much of myself to stand up and let other men throw mud at me," says one, as an excuse for not taking part in public life. But does he not care if his country has to stand among the nations and have mud thrown at her, because of these very men who misrepresent her before the world?

"There's no money in it if you're not a grafter," says another. "I prefer to keep out of politics and make my pile honestly if I can."

Alas! is there no such thing as disinterested service among Canadian men? There are men in plenty who would die for this country if the call to war came; are there none willing to live for her—to devote their talents and ambition to her advancement?

Next to a revival of religion, what we most need in this first quarter of the twentieth century is, I firmly believe, a revival of the spirit of true patriotism. We have carried our narrow individualism so far that we have almost lost the sense of the corporate life, and without this sense patriotism cannot exist.

The national life is just like the family life on a big scale, and if we lose the one, we lose the other. The family is bound together by kinship. The same blood flows in the veins of all and constitutes a bond as real as it is indefinable. The national tie is more spiritual than physical, but is no less real on that account. This is the corporate life. It may be developed and strengthened by care, or it may become so diminished and feeble for want of anything to sustain it that it can hardly be said to exist at all.

I hold that it is the woman's part to foster this corporate life in the family and in the nation.

There should be harmony and order in the family and in the nation; this there will always be when the government rests in strong, just hands. There should be kindly feeling among the different members—a willingness to give and take, and absence of jealousy; it

is easy to draw a parallel here between the family and the national federation. There should be a good understanding with the neighbors—no backbiting and slander. This is just as important for the self-respecting nation as for the self-respecting family. And there should be filial devotion. May the day never come when we Canadians cease to love and honor our Motherland across the sea!

There should be a deep regard for the honor of the family, and no less of the national, name—a willingness to defend it with our lives, if necessary; but especially a desire to adorn that name with the best and noblest in experience and achievement that the world affords.

Let us teach our children all this when we teach them to "honor the flag"—and let us begin by opening our own hearts and minds to a broader patriotism this Dominion Day, 1912.

THUNDER CAMP. (A Story for Children.)

CHAPTER III.

The weather was so cold and wet that Tom and Betty put off the carrying out of their plans from day to day, as the thought of rowing in an open boat up the Inlet, was far from attractive. But when the last day of May dawned, as gloomy as ever, they had to lay aside their fears, for it was now or never, as they knew.

Everything was arranged for their leaving the house the next day and Mr. Lembky had informed Tom that his ticket was bought for up-country. Betty with the two children were to go to Mrs. Lembky's, until a place could be found for the latter—a place where they could be clothed, fed and generally "done for," for the smallest possible sum of money.

Since the interview in the study Betty and Tom had been quite submissive and had raised no objections to anything that their so-called guardian proposed—Tom had been made to see the wisdom of this course by Betty, after a good many arguments.

"He will never suspect our deep plans if we act as if we were quite willing to do as he wants," she said.

"But I'm not willing," Tom objected. "Do you want me to lie?"

"No, indeed, of course not, Tom. Don't say anything, that's all, no matter what he proposes."

Mr. Lembky was delighted with the turn affairs had taken.

"There will be no trouble with the children," he assured his wife triumphantly. "Since that one display of temper there has not been a word of objection or criticism to anything I have proposed. I had anticipated a little difficulty and I am much relieved."

"I don't half like that little Betty," returned the lady. "She's too quiet and self-possessed for a child of her age. I dare say I'll find her as stubborn as a mule and I wish you had found some other place for her, Henry."

"Of all the unreasonable women," her husband exclaimed irritably. "How could I put a girl like that in service to any one else, and what else was there to do with her? You know as well as I do that you'll be well paid for it in the end."

They had many tiffs over the Marchmont children, for both had guilty consciences, and there is nothing so disturbing to the temper as a guilty conscience.

Mr. Lembky had not as yet been appointed trustee and guardian, but he had friends at Court and they had promised to consider the matter favorably as soon as the relatives in the East has been heard from. In the meantime he acted as if he were already in full charge both of the estate and the children, and he gave the latter to understand that he was their legally appointed guardian.

During these days Betty and Tom went on quietly making ready, but said never a word to the two youngest of what they intended doing. Babs had her suspicions, but being much offended at the lack of confidence shown her, she asked no questions and maintained a rather sulky silence.

Betty packed their oldest and warmest clothes in a separate box, putting in some thin things for the hot weather, also a well-stocked work basket, and writing materials, not forgetting stamps.

She longed to add a few story books, being very fond of reading, but Tom would not hear of it because they were so heavy.

"Well, we'll take a Bible anyway, Tom," said she, "the old family Bible with pictures."

"It weighs a ton!" her brother objected.

However, Betty insisted that it wouldn't be right to start on such an adventure without it, and he had to give way as he always did when Betty was very determined.

"There's a medicine book I'm going to put in, too," she added, "in case Danny gets sick."

"What's the use of a medicine book without medicine?" Tom asked, scornfully, which set Betty thinking.

In the end she took an assortment of simple remedies along, such as vaseline, sticking plaster and arnica. She was helped in her selection by a friendly druggist, who wanted her to include Gregory's Mixture in her list; but remembering how nasty it was, Betty would have none of it, so he gave her Fruit Salts instead, and some nice little pills that undertook to cure every ill under the sun.

At the same time Tom was laying in a stock of ammunition for the gun which his father had given him the previous fall when for one happy week they had camped at the cottage on the North Arm. A good supply of fishing tackle was bought, too. As Tom and Betty were both well supplied with money, they were quite ready to spend it liberally for anything that struck their fancy. But the things that Tom bought he took directly to the boathouse, for fear some one would notice all the parcels that were being carried into the house. In the boathouse lay the rowing boat and the canoe they intended to take with them, and also a small gasoline lanuch, which Tom did not know how to run (to his deep regret) and therefore—had to leave behind.

All was ready when the momentous day arrived.

At supper Babs and Danny were formally told that they were going away that night, while everything was fully explained to them, and Babs in her joy at the prospect ahead of them, forgot to be angry any more. Then at the last moment Ling promised to come with them through the treacherous Second Narrows, if they would land him at a point higher up where he had friends, and from whence he could get back to the city by train the next morning. Not that Ling was capable of being the slightest help or protection in a boat, but just to know that he would be there was a comfort, and gave the children courage to face the blackness of the night when the time came for leaving.

As for the Chinaman himself, no greater proof of his devotion could have been given than his willingness to accompany them on the first and worst part of their dangerous journey. The love of adventure did not enter into Ling's composition, and many an ominous shake of the head did he give that night

as he washed up the dishes for the last time.

As it was impossible to carry their large supply of provisions in the boat with them, it had been arranged to send them up by steamer the day after their departure, addressing them to a Chinese camp near the Marchmont cottage, where one of Ling's numerous "clousins" lived. This man, the cook assured them, would see that everything was brought down the mountain to them safely, for the camp was at a small mine high up on one of the steep hills in that neighborhood.

They trusted Ling implicitly in everything, and their trust was not misplaced. The groceries and the automobile vanished as if by magic on the eve of their departure. The latter they never heard of again, but the former reappeared in due time at their new home and proved entirely satisfactory.

Some provisions, of course, they took with them, enough for several days; also the box of warm clothing that Betty had packed. Bedding had been left at the cottage, plenty of good heavy rugs, red, brown and grey; also cots, pillows and mattresses; so that once there they thought they would be very comfortable as well as safe.

As soon as the night had fallen, not a moment was lost in getting away from the house as quietly as possible, Tom and Ling going first to get the boat ready, Betty leaving ten minutes later with the others. Everything had been carried down and packed during the day, for they lived near the water, so there was little more to do but take their seats when they got there.

The two older children each took an oar, while the Chinaman pushed the boat out of the house, after securing the canoe to the stern. Thereafter he sat with the tiller ropes in his hands, peering out into the darkness for driftwood or other obstacles, looking very white and frightened.

It was a dark, cloudy night, but the rain had stopped and fortunately the tide favored them, and there was no wind. Consequently the water was smooth and they made good progress, though neither Tom nor Betty was very skilful in handling the oars. Once away from the shore they were able to light a couple of lanterns, which they had been afraid to do before, and these dispelled the darkness a very little.

Danny, bundled up in rugs, fell asleep almost immediately, but Babs sat with wide-open eyes and parted lips, staring ahead. It was the first adventure of her life, but the

spice of danger was too pungent to be pleasant.

"We're in the Narrows!" she exclaimed, after they had been gliding for what appeared to be a very long time in silence through the water. "Oh, I'm so afraid we're going to be drowned!"

Half a minute later she gave a scream and half stood up: "The boat is turning round! We'll be over in a minute! Ling, Ling! make it go straight!"

"Sit down, Babbie! Are you crazy?" Tom shouted angrily; then as the boat righted itself immediately, he tried to reassure the frightened child, pulling all the while manfully against the conflicting currents, for at this point all the waters of the Inlet were forced by the tide through a narrow space, where they swirled and eddied tumultuously.

"We're all right, I tell you," said Tom, "the Narrows aren't half bad tonight; why, we'll be through them in a minute or two. You should have seen them when father and I came through one time last summer," and Tom launched into a thrilling tale of their narrow escape, which was anything but reassuring to his listeners.

Betty was horribly frightened, too, as she felt the boat squirm and shiver, but all she did was to pull with her whole strength, while Ling did his best to hold them straight, and the canoe danced merrily this way and that on the top of the waves.

It was hard rowing, and Tom's few minutes lengthened into half an hour before they were out of the swirl and into smooth water once more.

Babs, deeply thankful, curled up under the rugs beside her little brother, and did not forget to say her prayers before she fell asleep; while Tom and Betty talked cheerfully together and made plans for the future.

At length the lights of the small settlement where Ling was to leave them, appeared on their right, and they rowed in to the jetty. It cannot be denied that their courage sank at the thought of parting from their faithful Chinaman, and their hearts felt heavy as lead as they saw him step out of the boat.

"Goodbye, Missy Betty; goodbye, children," he said, "I tell bad man you go way on train, see you uncle. He no find you."

"Goodbye, Ling, dear old Ling!" they called after him as he disappeared in the darkness.

Then followed two more weary hours of cold and darkness and incessant rowing. The two children were unspeakably tired; sleep

gripped them so hard that they had the greatest difficulty in keeping up, and did not dare rest a moment for fear of falling into a doze.

If the mountains had not been so high on either side of them, they would, as they got further up into the North Arm of the Inlet, have seen a streak of dawn tinging the sky, for the night is short and the day long at the beginning of June. But they were surrounded by steep rocky mountains and all was still dark. The rocks dropped straight and sheer into the water and threw so deep a shadow that they could hardly do more than creep along, feeling their way as they went and terribly frightened lest they should miss the little cove they were looking for, the cove where their landing was and the path leading up to their house.

The only sound to disturb the silence of the night was the dip, dip, of their oars and the quiet breathing of the two little ones.

Then all at once Tom exclaimed, "Here we are, at last! Golly, but I'm glad. I never thought a night could be so long!"

"Are you sure, Tom? I can't see a thing!"

"Of course, I'm sure. Look at that fir on top of the rock; it's lop-sided, and I know every branch of it."

Against the dim grey sky Betty could see the fir that Tom pointed out. It looked familiar to her, too, and the relief of knowing that they were safe at their journey's end was so great that she was on the point of breaking down and crying, when suddenly, from the very foot of the fir as it seemed, a huge rock was hurled down and struck the water with such a splash that they were drenched with the spray!

At the same moment there was the sound of smashing branches, the rattle of falling pebbles, and what they took to be heavy, retreating footsteps.

"Great Scott! That was a big stone! And if it had fallen a couple of feet further this way it would have killed Danny sure."

"Oh, Tom! What could it have been? What could it have been?" cried Betty, terrified and all un-nerved.

"Blessed if I know," said Tom. "Anyhow it's gone now, whatever it was, and we've got to make a landing quick, or it will be daylight before we get into the house."

"It might have been a man," whispered Betty. "Oh, I'm so frightened! Let's stay in the boat till morning, Tom."

But Tom this time was the more sensible of the two.

"There'll be people about, perhaps, when it's daylight, and no one must see us landing here. Anyway, the house is on the other side of the cove from the draw, and whoever or whatever was on the rock went straight up that draw; it was the only way they could have gone. We've got to get those kids and ourselves to bed, so come on, Betty, be a sport; you generally are!"

Thus appealed to, Betty choked back her fears, which were due more to over-fatigue than to cowardice. She proceeded to wake the children, who had slept through the noise, the rocking of the boat and the drenching spray, while Tom rowed across the tiny cove to the landing on the other side. It was a rough wharf, consisting of four huge logs lashed together and secured to the rocks by heavy chains that permitted it to move up and down with the tide.

Everything was just as they had left it the previous year. The boat was made fast to the same iron ring that had always served for that purpose before, and the bundles of clothes and provisions were lifted out and left to be carried to the house later on.

Then the sleepy children were half dragged, half pushed up the steep trail. Tom carried the lantern ahead and threw open the door of the house when they got there.

It was not even locked.

AS BISMARCK VIEWED HIM.

Prince Bismark was once pressed by a certain American official to recommend his son for a diplomatic post. "He is a very remarkable fellow," said the proud father; "he speaks seven languages."

"Indeed!" said Bismark, who did not hold a very high opinion of linguistic acquirements. "What a wonderful head-waiter he would make!"

It happened in a Sunday school and the subject under discussion was Solomon and his wisdom. A little girl was asked to tell the story of Solomon and the women who quarreled over a child. This was her version: "Solomon was a very wise man. One day two women were quarreling about a baby. One woman said: 'This is my child,' and the other woman said, 'No, this is my child.' But Solomon spoke up and said: 'No, no, ladies, do not quarrel. Give me my sword and I will make twins of him, so you can each have one.'"

PEACH ORCHARD COVER CROPS

(By Mr. R. Thorpe, Guelph Agricultural College)

Cover crops should be sown in the fall of the year, and should be plowed under in the spring. Cover crops are of two kinds, namely, leguminous and non-leguminous; the former adds nitrogen to the soil, while the latter increases the moisture-holding capacity of the soil by holding the rain and snow till they sink into the earth. They also allow early tillage by causing the soil to dry out quicker. A leguminous cover crop is to be preferred in an orchard of young trees, when a certain amount of nitrogen is required, but as the trees grow older, non-leguminous crops should be used.

Crimson clover is the best of the leguminous crops. It makes excellent root growth and affords ample foliage for plowing under as green manure. It is sown at the rate of from 15 to 20 pounds per acre. Of the non-leguminous crops, rye and oats are both extensively grown. The former makes an excellent green manuring crop.

Cropping for the first two years after planting is allowable, and it gives a return from the land when the trees are not bearing potatoes, and other crops requiring late tillage should not be used; but such crops as tomatoes and small vegetables are to be highly recommended, as they require thorough tillage until mid-summer. Frequent and thorough cultivation is most desirable in the peach orchard till about August, after which the cover crop may be sown. Spring cultivation should be deep at first, becoming shallower as the season advances.

The chief diseases which attack the fruit are Brown Rot, Peach Scab, and Mildew.

The symptoms of the presence of Brown Rot are as follows: First, a small brown spot appears on the fruit, which rapidly enlarges and covers the whole fruit. On the surface of the diseased spots minute tufts of a grayish mold appear which finally develop into a soft rot.

To control Brown Rot and most fungous diseases, the trees should be sprayed with a mixture of lime and sulphur in proportion 8-8-50 and about two lbs. arsenate of lead. Three applications should be made, first when the calyces are shedding from the young fruit, then again three weeks later, while the last spraying should be made about a month before the fruit ripens, omitting the poison.

Peach Scab is the presence of little black spots on the fruit, and may be prevented by a lime-sulphur spray, just before the fruit sets.

Another common disease is the Peach Leaf Curl. It attacks young trees, causing the leaf to blister and curl. The disease starts when the buds burst and the spores spread all the year. This disease may be remedied by spraying with a fungicide.

One of the diseases, with the most disastrous results is the Yellows.

It is a premature ripening of the fruit, which becoming enlarged to an abnormal size, takes on an unnatural purple and red coloring, and has a bitter taste. Bushy leaf or small twig growth is a certain indication of Yellows.

There has been no cure yet discovered, and being such a contagious disease great care should be taken to prevent the spread of it through orchards. Infected trees should be dug up and burnt. Little Peach is another very infectious disease of peaches of which comparatively little is yet known.

If on cutting through the fruit of a suspected tree the stone is found to be quite hard, the tree is probably affected with Little Peach, and should be destroyed. For further information on this disease I would recommend Bulletin 185 of the Ontario Agricultural College.

The three most common insect enemies are, the Peach-tree Borer, Bark Louse, and the Plum Curculio.

The Peach-tree Borer feeds on the bark and sapwood, causing a copious exudation of gum which forms in a thick mass round the trunk. This gum contains a casting of the worm. In badly infested trees the whole bark at the base is eaten away several inches below the surface.

The best remedy or rather preventative seems to be that coating the trunk with a mixture of soap and tobacco water and then mounding up earth to a foot or higher round the trunk of the tree.

There are numerous other insect pests and diseases which time and space prevent my mentioning here; but I have endeavored to acquaint the reader with the more common diseases.

One of the easiest and most inexpensive methods of preventing the killing of fruit buds in winter is to whitewash the branches and buds.

It has been shown by experiment that whitened buds remain dormant till April, while unprotected buds will begin to swell late in February, and that 80 per cent. of whitened buds pass through the winter safely. White-washing trees also tends to lessen damage done by insects.

An early winter spray causes the trees to blossom earlier. The following winter spray has been tried, and is recommended by Mr. A. B. Cutting: Lime, 2 lbs.; water, 1 gal.; salt, 5 ozs., and skimmilk, 1 quart.

This mixture should be applied when warm at the rate of 1 gallon per tree, costing about 10 cents per tree for a winter.

The proper time to pick peaches is when they are full grown, firm and have a faint yellow tinge to color. The fruit should be handled carefully and placed in 11-quart baskets. These baskets are taken to the packing house and the peaches are packed and graded into No. 1 and No. 2 grades, ready for the market. Any grade lower than No. 2 is generally only fit for canning purposes.

There are various ways in which the fruit-grower may dispose of his peaches. There are the big co-operative societies as the Ontario and Western, then there are the ordinary fruit-buyers and the canning factories. A beginner, however, must find out for himself the most profitable method of disposing of his fruit.

After the crop is harvested there remains nothing to be done except the winter pruning which has already been mentioned.

The writer, therefore, will conclude, hoping that this short thesis will benefit in some way any who may read it.

MCINTOSH MONUMENT

A monument to the original McIntosh Red apple was unveiled at Dundela, Ont., on June 8th. The ceremony was conducted by Andrew Broder, M.P. Addresses were also given by W. B. Roadhouse, Deputy Minister of Agriculture; Dr. John Harkness, Adam Harkness, A. McNeil, Chief of the Fruit Division, and A. D. Campbell.

The monument stands on the roadside, about 20 rods south of the spot where the tree was planted. The trunk and a few branches of the old tree are still standing. The tree was one of a number of seedlings, found on the edge of the clearing by the late John McIntosh, and planted near his house in 1796. The tree grew rapidly, and after a few years began to bear the splendid apple

we now know as the McIntosh Red. About 1836, Mr. McIntosh began to propagate the variety by budding and grafting, and the fruit is now widely cultivated throughout America. In 1893 the house was destroyed by fire, and the old tree suffered considerable injury. It survived, however, until 1908, when the leaves withered and the apples dropped off. Thus the parent tree of the McIntosh Red died after 112 years.

The idea of a monument was advanced about two years ago by Mr. A. McNeil. At a meeting of the Fruit Institute, a committee consisting of Messrs. Andrew Broder, George Smyth and A. D. Campbell was appointed to deal with the matter. The necessary funds were subscribed by citizens of Dundas county and this ceremony saw the work well completed.

HIS ANCESTORS.

The chauffeur never spoke except when addressed, but his few utterances, given in a broad brogue, were full of wit.

One of the men in the party remarked: "You're a bright sort of a fellow and it's easy to see that your people came from Ireland."

"No, sir; ye are very badly mistaken," replied Pat.

"What!" said the man; "didn't they come from Ireland?"

"No, sir," answered Pat, "they're there yit."

"God of our fathers, know of old,
Lord of our far-flung battle line.
Beneath whose awful hand we hold
Dominion over palm and pine,
Lord God of Hosts, be with us yet,
Lest we forget, lest we forget."

WHY HE WOULDN'T OBEY ORDERS.

An Irish hod carrier was carrying mortar to the top of a skyscraper which was being built. One day he went up and couldn't find his way down. The boss missed him and called up to him:

"Pat," he said, "why don't you come down?"

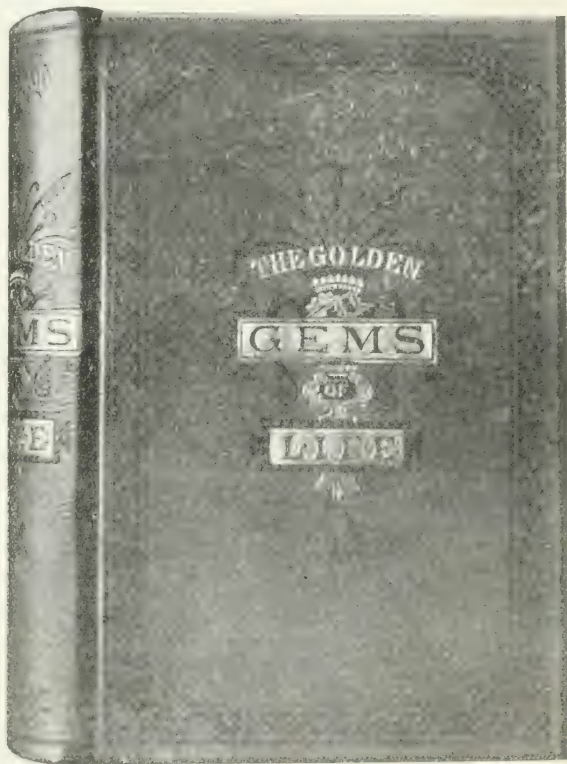
"I don't know the way," replied Pat.

"Why come down the way you went up."

"Faith and I'll not," said Pat; "sure, I came up head first."

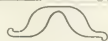
Golden Gems of Life

The Golden Gems of Life a half-size cut of which is shown here is one of the valuable *Premiums* now offered free to Canadian subscribers to THE FRUIT MAGAZINE, SCIENTIFIC FARMER AND CANADIAN CITIZEN, on conditions set forth on Page 20, of the Advertising Section of this number. This handsome volume contains upwards of 200 pages of highly instructive reading matter, beautifully illustrated with steel engravings and containing a chapter on every phase of human life. The book is printed on toned rose-tinted calendared paper, hand sewed and handsomely bound in silk-finish cloth, with gold and black stamp.



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PREMIUMS



The Fruit Magazine, *Scientific Farmer* and *Canadian Citizen* has been so well received throughout Canada, to say nothing of the large circulation enjoyed in other parts of the English-speaking world, that the publishers have decided to offer such extraordinary inducements, by way of Premiums, as should insure its being placed on the permanent annual magazine list of practically every family in Canada. We send this magazine postpaid to any part of the world for the regular Canadian subscription price of \$1.50 a year, but this premium offer applies to Canadian subscribers only.

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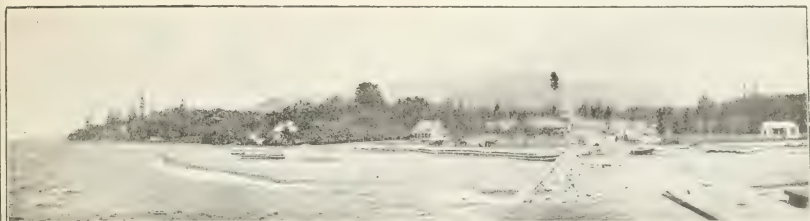
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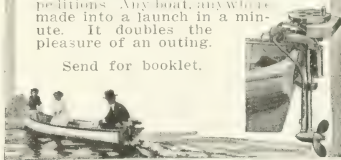
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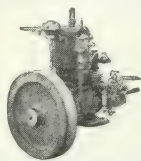
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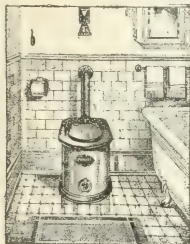


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Tree Time

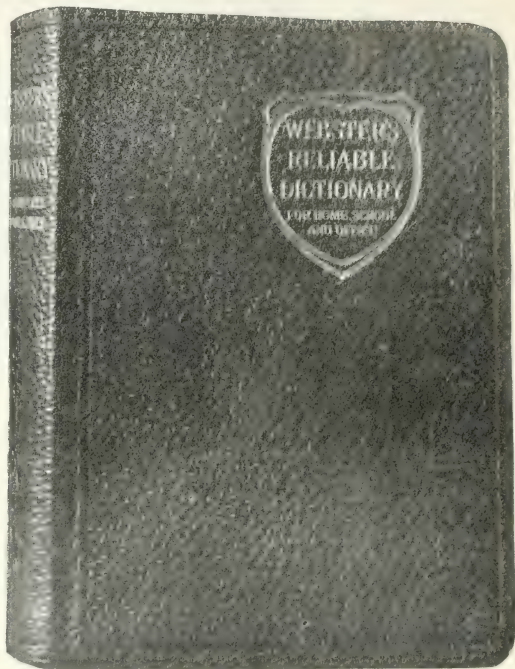
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 You want fertile soil, a comfortable homesite, and the best of social surroundings.
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